THE URBAN COMMUNITY

By ERNEST W. BURGESS

The University of Chicago Press

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THE URBAN COMMUNITY

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Sociological Society
1925

EDITED BY ERNEST W. BURGESS
Secretary of the American Sociological Society

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PREFACE

Nine years ago the central topic at the annual meeting of the American Sociological Society was "Rural Sociology." So great was the demand for the volume, especially for use in classes in universities and colleges, that a second edition was necessary. This year when the papers read at the main sessions of the Society were organized around the subject "The City" the Executive Committee, in anticipation of a like interest, authorized the publication of a special edition, to which it has seemed best to give the title *The Urban Community*.

It is probably not merely a historical accident that the systematic study of rural life has preceded by more than a decade the sociological study of the city. Indeed, the center of gravity of the country-life movement had been from the start not in the solution of the economic problems of the farmer, nor even in social reform in the narrower sense of that term, but in the cultural life of the rural community and its development in response to the changing economic and social situation. The work of Butterfield, Galpin, and Gillette, to mention only three pioneer rural sociologists, has been more concerned with the analysis and the description of the economic, social, and cultural organization of the rural community than with the more technical matters of scientific agriculture, of the administration of co-operative enterprises, or of rural health and social work.

The absence of a corresponding urban-life movement may be attributed to several causes. The very size and complexity of the city; the unforeseen and seemingly unpredictable changes which accompany rapid growth; the mobility and diversity of its population, have made it difficult, almost impossible, to conceive of the city as

anything more than a geographical or administrative unit. At the same time the very urgency of the many social problems, accentuated if not caused by urban growth, has given rise not to *one*, but to many and diverse movements.

As a matter of fact, the city has been the "happy hunting ground" of movements: the better-government movement, the social-work movement, the public-health movement, the playground movement, the social-center movement, the settlement movement, the Americanization movement. All these movements, lacking a basic understanding or conception of the city, have relied upon administrative devices, for the most part, to correct the evils of city life. Even the community organization movement, theoretically grounded upon a conception of the city as a unit, had the misfortune to stake its program upon an assumption of the supreme value of the revival of the neighborhood in the city instead of upon a pragmatic, experimental program guided by studies of actual conditions and trends in urban life.

The tendency at present is to think of the city as living, growing; as an organism, in short. This notion of the city in terms of growth and behavior gives the character of order and unity to the many concrete phenomena of the city which otherwise, no matter how interesting, seemed but meaningless flotsam and jetsam in the drift of urban life. With the dawning perception of the breakdown of our traditional institutions of social control, and of the failure of the many promising makeshifts for them, a disposition is emerging to base fundamental changes in these institutions upon a more fundamental understanding of the city as a product of the interplay of economic and cultural forces.

This volume may be taken, perhaps, as a prospectus of the present state and promise of sociological research in this field. The introductory paper by President Robert E. Park indicates the range of the materials for research represented in the papers which follow. At the same time, it seeks to chart and analyze the significance of

the interrelationships of the different techniques of research, ecological, cultural, and statistical, which have been and are being applied to the study of the city. The main divisions of this volume mark off certain of these fields even more sharply: human nature and the city; the social biology of city life; statistics of the city; the ecology of the city.

The individual papers no doubt have a value independent of their place in this volume. But it is believed that their value is increased by indicating their position and significance with reference to a general topic. In this sense, the volume is something more than an exhibit of research in progress; it is an introduction to an urban sociology.

From the beginning the papers read at meetings of the Society, as in this volume, have been, so far as possible, organized about some single topic. But with the growth of technical interests in a growing number of diverse fields, this aim is rendered the more difficult. Yet this is just the course of development by which sociology is being transformed from a social philosophy into a science of society. At the same time, so far as different points of view and methods of study can be focused upon a single subject, the results, while varied, are more fruitful. In this volume, the attempt is made to present not only from a fundamental point of view, but also from different angles, the present findings of research on the city. In this way, too, perhaps as well as in any other way, are exhibited whatever practical bearings theoretical studies have upon the practical problems of city life. The reader will also understand the reason for the necessary lack of rigid co-ordination of the papers and the absence of an all-round treatment of the different aspects of city life.

Ernest W. Burgess

July 7, 1926

CONTENTS

INTRODUCTION

PAGE

The Urban Community as a Spacial Pattern and a Moral Order. *Robert E. Park* 3

HUMAN NATURE AND THE CITY

The Nature of Human Nature. *Ellsworth Faris* 21

The Problem of Personality in the Urban Environment. *William I. Thomas* 38

Social Distance in the City. *E. S. Bogardus* 48

A Social Philosophy of the City. *Nicholas J. Spykman* 55

SOCIAL BIOLOGY OF CITY LIFE

Sociology and Biology. *E. B. Reuter* 67

The Biological and Sociological Processes. *E. H. Sutherland* . . 70

The Eugenics of the City. *Roswell H. Johnson* 79

Some Effects of Social Selection on the American Negro. *Melville J. Herskovits* 91

The Dweller in Furnished Rooms: An Urban Type. *Harvey W. Zorbaugh* 98

Some Jewish Types of Personality. *Louis Wirth* 106

STATISTICS OF THE CITY

A Redefinition of "City" in Terms of Density of Population. *Walter F. Willcox* 115

American City Birth-Rates. *H. B. Woolston* 122

Some Economic Factors in the Determination of the Size of American Cities. *C. E. Gehlke* 133

The Urban Expectation of Life in 2000 A.D. *Hornell Hart* . . . 139

The Statistical Relationship between Population and the City Plan. *Ernest P. Goodrich* 144

The Rate of Growth of Certain Classes of Cities in the United States. *J. M. Gillette* 151

PAGE

Population Mobility and Community Organization. *Le Roy E. Bowman* 155

Maladjustment of Youth in Relation to Density of Population. *M. C. Elmer* 161

ECOLOGY OF THE CITY

The Scope of Human Ecology. *R. D. McKenzie* 167

The Rise of the Metropolitan Community. *N. S. B. Gras* . . . 183

The Distribution of Commercialized Vice in the City: A Sociological Analysis. *Walter C. Reckless* 192

Community Participation in City and Regional Planning. *Shelby M. Harrison* 206

The Natural Areas of the City. *Harvey W. Zorbaugh* 219

TYPICAL STUDIES IN URBAN SOCIOLOGY

The City as a Community: An Introduction to a Research Project. *Cecil C. North* 233

The Local Community as a Unit in the Planning of Urban Residential Areas. *Clarence Arthur Perry* 238

The Research Resources of a Typical American City as Exemplified by the City of Buffalo. *Niles Carpenter* 242

The Study of Ethnic Factors in Community Life. *B. B. Wessel* . 247

Segregation of Population Types in the Kansas City Area. *Stuart A. Queen* 251

The Effect of Immigration upon the Increase of Population in the United States. *J. M. Gillette* 254

Changes in Occupation and Economic Status of Several Hundreds of American Families during Four Generations. *Pitirim A. Sorokin* 257

INDEX

Index 265

INTRODUCTION

THE URBAN COMMUNITY AS A SPACIAL PATTERN AND A MORAL ORDER[1]

Some thirty years ago Professor Eugenius Warming, of Copenhagen, published a little volume entitled *Plant Communities (Plantesamfund)*. Warming's observations called attention to the fact that different species of plants tend to form permanent groups, which he called communities. Plant communities, it turned out, exhibit a good many of the traits of living organisms. They come into existence gradually, pass through certain characteristic changes, and eventually are broken up and succeeded by other communities of a very different sort. These observations later become the point of departure for a series of investigations which have since become familiar under the title "Ecology."

Ecology, in so far as it seeks to describe the actual distribution of plants and animals over the earth's surface, is in some very real sense a geographical science. Human ecology, as the sociologists would like to use the term, is, however, not identical with geography, nor even with human geography. It is not man, but the community; not man's relation to the earth which he inhabits, but his relations to other men, that concerns us most.

Within the limits of every natural area the distribution of population tends to assume definite and typical patterns. Every local group exhibits a more or less definite constellation of the individual units that compose it. The form which this constellation takes, the position, in other words, of every individual in the community with reference to every other, so far as it can be described in general terms, constitutes what Durkheim and his school call the morphological aspect of society.[2]

[1] Presidential address.

[2] Geographers are probably not greatly interested in social morphology as such. On the other hand, sociologists are. Geographers, like historians, have been tradi-

Human ecology, as sociologists conceive it, seeks to emphasize not so much geography as space. In society we not only live together, but at the same time we live apart, and human relations can always be reckoned, with more or less accuracy, in terms of distance. In so far as social structure can be defined in terms of position, social changes may be described in terms of movement; and society exhibits, in one of its aspects, characters that can be measured and described in mathematical formulas.

Local communities may be compared with reference to the areas which they occupy and with reference to the relative density of population distribution within those areas. Communities are not, however, mere population aggregates. Cities, particularly great cities, where the selection and segregation of the populations has gone farthest, display certain morphological characteristics which are not found in smaller population aggregates.

One of the incidents of size is diversity. Other things being equal, the larger community will have the wider division of labor. An examination a few years ago of the names of eminent persons listed in *Who's Who* indicated that in one large city (Chicago) there were, in addition to the 509 occupations listed by the census, 116 other occupations classed as professions. The number of professions requiring special and scientific training for their practice is an index and a measure of the intellectual life of the community. For the intellectual life of a community is measured not merely by the scholastic attainments of the average citizen, nor even by the communal intelligence-quotient, but by the extent to which rational methods have been applied to the solution of communal problems—health, industry, and social control, for example.

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tionally interested in the actual rather than the typical. Where are things actually located? What did actually happen? These are the questions that geography and history have sought to answer. See *A Geographical Introduction to History,* by M. Lucien Febvre and Lionel Bataillon.

One reason why cities have always been the centers of intellectual life is that they have not only made possible, but have enforced, an individualization and a diversification of tasks. Only as every individual is permitted and compelled to focus his attention upon some small area of the common human experience, only as he learns to concentrate his efforts upon some small segment of the common task, can the vast co-operation which civilization demands be maintained.

In an interesting and suggestive paper read before the American Sociological Society at its meeting in Washington in 1922, Professor Burgess sketched the processes involved in the growth of cities. The growth of cities has usually been described in terms of extensions of territory and increase in numbers. The city itself has been identified with an administrative area, the municipality; but the city, with which we are here concerned, is not a formal and administrative entity. It is rather a product of natural forces, extending its own boundaries more or less independently of the limits imposed upon it for political and administrative purposes. This has become to such an extent a recognized fact that in any thoroughgoing study of the city, either as an economic or a social unit, it has been found necessary to take account of natural, rather than official, city boundaries. Thus, in the city-planning studies of New York City, under the direction of the Russell Sage Foundation, New York City includes a territory of 5,500 square miles, including in that area something like one hundred minor administrative units, cities, and villages, with a total population of 9,000,000.

We have thought of the growth of cities as taking place by a mere aggregation. But an increase in population at any point within the urban area is inevitably reflected and felt in every other part of the city. The extent to which such an increase of population in one part of the city is reflected in every other depends very largely upon the character of the local transportation system. Every ex-

tension and multiplication of the means of transportation connecting the periphery of the city with the center tends to bring more people to the central business district, and to bring them there oftener. This increases the congestion at the center; it increases, eventually, the height of office buildings and the values of the land on which these buildings stand. The influence of land values at the business center radiates from that point to every part of the city. If the growth at the center is rapid it increases the diameter of the area held for speculative purposes just outside the center. Property held for speculation is usually allowed to deteriorate. It easily assumes the character of a slum; that is to say, an area of casual and transient population, an area of dirt and disorder, "of missions and of lost souls." These neglected and sometimes abandoned regions become the points of first settlement of immigrants. Here are located our ghettos, and sometimes our bohemias, our Greenwich Villages, where artists and radicals seek refuge from the fundamentalism and the Rotarianism, and, in general, the limitations and restrictions of a Philistine World. Every large city tends to have its Greenwich Village just as it has its Wall Street.

The growth of the city involves not merely the addition of numbers, but all the incidental changes and movements that are inevitably associated with the efforts of every individual to find his place in the vast complexities of urban life. The growth of new regions, the multiplication of professions and occupations, the incidental increase in land values which urban expansion brings—all are involved in the processes of city growth, and can be measured in terms of changes of position of individuals with reference to other individuals, and to the community as a whole. Land values can be reckoned, for example, in terms of mobility of population. The highest land values exist at points where the largest number of people pass in the course of twenty-four hours.

The community, as distinguished from the individuals who

compose it, has an indefinite life-span. We know that communities come into existence, expand and flourish for a time, and then decline. This is as true of human societies as it is of plant communities. We do not know with any precision as yet the rhythm of these changes. We do know that the community outlives the individuals who compose it. And this is one reason for the seemingly inevitable and perennial conflict between the interests of the individual and the community. This is one reason why it costs more to police a growing city than one which is stationary or declining.

Every new generation has to learn to accommodate itself to an order which is defined and maintained mainly by the older. Every society imposes some sort of discipline upon its members. Individuals grow up, are incorporated into the life of the community, and eventually drop out and disappear. But the community, with the moral order which it embodies, lives on. The life of the community therefore involves a kind of metabolism. It is constantly assimilating new individuals, and just as steadily, by death or otherwise, eliminating older ones. But assimilation is not a simple process, and, above all else, takes time.

The problem of assimilating the native-born is a very real one; it is the problem of the education of children in the homes and of adolescents in the schools. But the assimilation of adult migrants, finding for them places in the communal organization, is a more serious problem: it is the problem of adult education, which we have just in recent years begun to consider with any real sense of its importance.

There is another aspect of the situation which we have hardly considered. Communities whose population increase is due to the excess of births over deaths and communities whose increase is due to immigration exhibit important differences. Where growth is due to immigration, social change is of necessity more rapid and more profound. Land values, for one thing, increase more rapidly; the

replacement of buildings and machinery, the movement of population, changes in occupation, increase in wealth, and reversals in social position proceed at a more rapid tempo. In general, society tends to approach conditions which are now recognized as characteristic of the frontier.

In a society in which great and rapid changes are in progress there is a greater need for public education of the sort that we ordinarily gain through the public press, through discussion and conversation. On the other hand, since personal observation and tradition, upon which common sense, as well as the more systematic investigations of science, is finally based, are not able to keep pace with changes in conditions, there occurs what has been described by Ogburn as the phenomenon of "cultural lag." Our political knowledge and our common sense do not keep up with the actual changes that are taking place in our common life. The result is, perhaps, that as the public feels itself drifting, legislative enactments are multiplied, but actual control is decreased. Then, as the public realizes the futility of legislative enactments, there is a demand for more drastic action, which expresses itself in ill-defined mass movements and, often, in mere mob violence. For example, the lynchings in the southern states and the race riots in the North.

So far as these disorders are in any sense related to movements of population—and recent studies of race riots and lynchings indicate that they are—the study of what we have described as social metabolism may furnish an index, if not an explanation, of the phenomenon of race riots.

One of the incidents of the growth of the community is the social selection and segregation of the population, and the creation, on the one hand, of natural social groups, and on the other, of natural social areas. We have become aware of this process of segregation in the case of the immigrants, and particularly in the case of the so-called historical races, peoples who, whether immigrants

or not, are distinguished by racial marks. The Chinatowns, the Little Sicilies, and the other so-called "ghettos" with which students of urban life are familiar are special types of a more general species of natural area which the conditions and tendencies of city life inevitably produce.

Such segregations of population as these take place, first, upon the basis of language and of culture, and second, upon the basis of race. Within these immigrant colonies and racial ghettos, however, other processes of selection inevitably take place which bring about segregation based upon vocational interests, upon intelligence, and personal ambition. The result is that the keener, the more energetic, and the more ambitious very soon emerge from their ghettos and immigrant colonies and move into an area of second immigrant settlement, or perhaps into a cosmopolitan area in which the members of several immigrant and racial groups meet and live side by side. More and more, as the ties of race, of language, and of culture are weakened, successful individuals move out and eventually find their places in business and in the professions, among the older population group which has ceased to be identified with any language or racial group. The point is that change of occupation, personal success or failure—changes of economic and social status, in short—tend to be registered in changes of location. The physical or ecological organization of the community, in the long run, responds to and reflects the occupational and the cultural. Social selection and segregation, which create the natural groups, determine at the same time the natural areas of the city.

The modern city differs from the ancient in one important respect. The ancient city grew up around a fortress; the modern city has grown up around a market. The ancient city was the center of a region which was relatively self-sufficing. The goods that were produced were mainly for home consumption, and not for trade beyond the limits of the local community. The modern city, on the

other hand, is likely to be the center of a region of very highly specialized production, with a corresponding widely extended trade area. Under these circumstances the main outlines of the modern city will be determined (1) by local geography and (2) by routes of transportation.

Local geography, modified by railways and other major means of transportation, all connecting, as they invariably do, with the larger industries, furnish the broad lines of the city plan. But these broad outlines are likely to be overlaid and modified by another and a different distribution of population and of institutions, of which the central retail shopping area is the center. Within this central downtown area itself certain forms of business, the shops, the hotels, theaters, wholesale houses, office buildings, and banks, all tend to fall into definite and characteristic patterns, as if the position of every form of business and building in the area were somehow fixed and determined by its relation to every other.

Out on the periphery of the city, again, industrial and residential suburbs, dormitory towns, and satellite cities seem to find, in some natural and inevitable manner, their predetermined places. Within the area bounded on the one hand by the central business district and on the other by the suburbs, the city tends to take the form of a series of concentric circles. These different regions, located at different relative distances from the center, are characterized by different degrees of mobility of the population.

The area of greatest mobility, i.e., of movement and change of population, is naturally the business center itself. Here are the hotels, the dwelling-places of the transients. Except for the few permanent dwellers in these hotels, the business center, which is the city *par excellence,* empties itself every night and fills itself every morning. Outside the city, in this narrower sense of the term, are the slums, the dwelling-places of the casuals. On the edge of the slums there are likely to be regions, already in process of

being submerged, characterized as the "rooming-house areas," the dwelling-places of bohemians, transient adventurers of all sorts, and the unsettled young folk of both sexes. Beyond these are the apartment-house areas, the region of small families and delicatessen shops. Finally, out beyond all else, are the regions of duplex apartments and of single dwellings, where people still own their homes and raise children, as they do, to be sure, in the slums.

The typical urban community is actually much more complicated than this description indicates, and there are characteristic variations for different types and sizes of cities. The main point, however, is that everywhere the community tends to conform to some pattern, and this pattern invariably turns out to be a constellation of typical urban areas, all of which can be geographically located and spacially defined.

Natural areas are the habitats of natural groups. Every typical urban area is likely to contain a characteristic selection of the population of the community as a whole. In great cities the divergence in manners, in standards of living, and in general outlook on life in different urban areas is often astonishing. The difference in sex and age groups, perhaps the most significant indexes of social life, are strikingly divergent for different natural areas. There are regions in the city in which there are almost no children, areas occupied by the residential hotels, for example. There are regions where the number of children is relatively very high: in the slums, in the middle-class residential suburbs, to which the newly married usually graduate from their first honeymoon apartments in the city. There are other areas occupied almost wholly by young unmarried people, boy and girl bachelors. There are regions where people almost never vote, except at national elections; regions where the divorce rate is higher than it is for any state in the Union, and other regions in the same city where there are almost no divorces. There are areas infested by boy gangs and the athletic and political

clubs into which the members of these gangs or the gangs themselves frequently graduate. There are regions in which the suicide rate is excessive; regions in which there is, as recorded by statistics, an excessive amount of juvenile delinquency, and other regions in which there is almost none.

All this emphasizes the importance of location, position, and mobility as indexes for measuring, describing, and eventually explaining, social phenomena. Bergson has defined mobility as "just the idea of motion which we form when we think of it by itself, when, so to speak, from motion we abstract mobility." Mobility measures social change and social disorganization, because social change almost always involves some incidental change of position in space, and all social change, even that which we describe as progress, involves some social disorganization. In the paper already referred to, Professor Burgess points out that various forms of social disorganization seem to be roughly correlated with changes in city life that can be measured in terms of mobility. All this suggests a further speculation. Since so much that students of society are ordinarily interested in seems to be intimately related to position, distribution, and movements in space, it is not impossible that all we ordinarily conceive as social may eventually be construed and described in terms of space and the changes of position of the individuals within the limits of a natural area; that is to say, within the limits of an area of competitive co-operation. Under such interesting conditions as these all social phenomena might eventually become subject to measurement, and sociology would become actually what some persons have sought to make it, a branch of statistics.

Such a scheme of description and explanation of social phenomena, if it could be carried out without too great a simplification of the facts, would certainly be a happy solution of some of the fundamental logical and epistemological problems of sociology.

Reduce all social relations to relations of space and it would be possible to apply to human relations the fundamental logic of the physical sciences. Social phenomena would be reduced to the elementary movements of individuals, just as physical phenomena, chemical action, and the qualities of matter, heat, sound, and electricity are reduced to the elementary movements of molecules and atoms.

The difficulty is that in kinetic theories of matter, elements are assumed to remain unchanged. That is, of course, what we mean by element and elementary. Since the only changes that physical science reckons with are changes in space, all qualitative differences are reduced to quantitative differences, and so made subject to description in mathematical terms. In the case of human and social relations, on the other hand, the elementary units—that is to say, the individual men and women who enter into these different combinations—are notoriously subject to change. They are so far from representing homogeneous units that any thoroughgoing mathematical treatment of them seems impossible.

Society, as John Dewey has remarked, exists in and through communication, and communication involves not a translation of energies, such as seems to take place between individual social units, for example, in suggestion or imitation, two of the terms to which sociologists have at various times sought to reduce all social phenomena; but rather communication involves a transformation in the individuals who thus communicate. And this transformation goes on unceasingly with the accumulation of individual experiences in individual minds.

If human behavior could be reduced again, as some psychologists have sought to reduce it, to a few elementary instincts, the application of the kinetic theories of the physical sciences to the explanation of social life would be less difficult. But these instincts, even if they may be said to exist, are in constant process of change

through the accumulation of memories and habits. And these changes are so great and continuous that to treat individual men and women as constant and homogeneous social units involves too great an abstraction. That is the reason why we are driven finally, in the explanation of human conduct and society, to psychology. In order to make comprehensible the changes which take place in society it is necessary to reckon with the changes which take place in the individual units of which society seems to be composed. The consequence is that the social element ceases to be the individual and becomes an attitude, the individual's tendency to act. Not individuals, but attitudes, interact to maintain social organizations and to produce social changes.

This conception means that geographical barriers and physical distances are significant for sociology only when and where they define the conditions under which communication and social life are actually maintained. But human geography has been profoundly modified by human invention. The telegraph, telephone, newspaper, and radio, by converting the world into one vast whispering-gallery, have dissolved the distances and broken through the isolation which once separated races and people. New devices of communication are steadily multiplying, and incidentally complicating, social relations. The history of communication is, in a very real sense, the history of civilization. Language, writing, the printing press, the telegraph, telephone, and radio mark epochs in the history of mankind. But these, it needs to be said, would have lost most of their present significance if they had not been accompanied by an increasingly wider division of labor.

I have said that society exists in and through communication. By means of communication individuals share in a common experience and maintain a common life. It is because communication is fundamental to the existence of society that geography and all the other factors that limit or facilitate communication may be said to

enter into its structure and organization at all. Under these circumstances the concept of position, of distance, and of mobility have come to have a new significance. Mobility is important as a sociological concept only in so far as it insures new social contact, and physical distance is significant for social relations only when it is possible to interpret it in terms of social distance.

The social organism—and that is one of the most fundamental and disconcerting things about it—is made up of units capable of locomotion. The fact that every individual is capable of movement in space insures him an experience that is private and peculiar to himself, and this experience, which the individual acquires in the course of his adventures in space, affords him, in so far as it is unique, a point of view for independent and individual action. It is the individual's possession and consciousness of a unique experience, and his disposition to think and act in terms of it, that constitutes him finally a person.

The child, whose actions are determined mainly by its reflexes, has at first no such independence and no such individuality, and is, as a matter of fact, not a person.

It is this diversity in the experiences of individual men that makes communication necessary and consensus possible. If we always responded in like manner to like stimulation there would not be, as far as I can see, any necessity for communication, nor any possibility of abstract and reflective thought. The demand for knowledge arises from the very necessity of checking up and funding these divergent individual experiences, and of reducing them to terms which make them intelligible to all of us. A rational mind is simply one that is capable of making its private impulses public and intelligible. It is the business of science to reduce the inarticulate expression of our personal feelings to a common universe of discourse, and to create out of our private experiences an objective and intelligible world.

We not only have, each of us, our private experiences, but we are acutely conscious of them, and much concerned to protect them from invasion and misinterpretation. Our self-consciousness is just our consciousness of these individual differences of experience, together with a sense of their ultimate incommunicability. This is the basis of all our reserves, personal and racial; the basis, also, of our opinions, attitudes, and prejudices. If we were quite certain that everyone was capable of taking us, and all that we regard as personal to us, at our own valuation; if, in other words, we were as naïve as children, or if, on the other hand, we were all as suggestible and lacking in reserve as some hysterics, we should probably have neither persons nor society. For a certain isolation and a certain resistance to social influences and social suggestion is just as much a condition of sound personal existence as of a wholesome society. It is just as inconceivable that we should have persons without privacy as it is that we should have society without persons.

It is evident, then, that space is not the only obstacle to communication, and that social distances cannot always be adequately measured in purely physical terms. The final obstacle to communication is self-consciousness.

What is the meaning of this self-consciousness, this reserve, this shyness, which we so frequently feel in the presence of strangers? It is certainly not always fear of physical violence. It is the fear that we will not make a good impression; the fear that we are not looking our best; that we shall not be able to live up to our conception of ourselves, and particularly, that we shall not be able to live up to the conception which we should like other persons to have of us. We experience this shyness in the presence of our own children. It is only before our most intimate friends that we are able to relax wholly, and so be utterly undignified and at ease. It is only under such circumstances, if ever, that communication is complete

and that the distances which separate individuals are entirely dissolved.

This world of communication and of "distances," in which we all seek to maintain some sort of privacy, personal dignity, and poise, is a dynamic world, and has an order and a character quite its own. In this social and moral order the conception which each of us has of himself is limited by the conception which every other individual, in the same limited world of communication, has of himself, and of every other individual. The consequence is—and this is true of any society—every individual finds himself in a struggle for status: a struggle to preserve his personal prestige, his point of view, and his self-respect. He is able to maintain them, however, only to the extent that he can gain for himself the recognition of everyone else whose estimate seems important; that is to say, the estimate of everyone else who is in his set or in his society. From this struggle for status no philosophy of life has yet discovered a refuge. The individual who is not concerned about his status in some society is a hermit, even when his seclusion is a city crowd. The individual whose conception of himself is not at all determined by the conceptions that other persons have of him is probably insane.

Ultimately the society in which we live invariably turns out to be a moral order in which the individual's position, as well as his conception of himself—which is the core of his personality—is determined by the attitudes of other individuals and by the standards which the group uphold. In such a society the individual becomes a person. A person is simply an individual who has somewhere, in some society, social status; but status turns out finally to be a matter of distance—social distance.

It is because geography, occupation, and all the other factors which determine the distribution of population determine so irresistibly and fatally the place, the group, and the associates with

whom each one of us is bound to live that spacial relations come to have, for the study of society and human nature, the importance which they do.

It is because social relations are so frequently and so inevitably correlated with spacial relations; because physical distances, so frequently are, or seem to be, the indexes of social distances, that statistics have any significance whatever for sociology. And this is true, finally, because it is only as social and psychical facts can be reduced to, or correlated with, spacial facts that they can be measured at all.

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I

HUMAN NATURE AND THE CITY

THE NATURE OF HUMAN NATURE

Human nature, as English vernacular speech uses it, is a very paradoxical term. On the one hand it is the culprit explaining, if not justifying, acts that are wicked and lapses that are weak. When our priests and pastors are disappointed in us, human nature is our alibi. It nullifies the work of pacifists and prohibitionists, and might almost be defined as that with which fanatical reformers fail to reckon. On the other hand, human nature is sometimes a beautiful discovery and a pleasant surprise. When queer, fierce, and savage folk act in a comprehensible fashion we call them human as an honorific ascription. When human nature was discovered in the slaves it led ineluctably to their emancipation. Seen in the untouchables of India, it is at this moment in process of raising their status. To find them human is good and leads men to praise and draw near.

In the attempt to sharpen the denotation of the term, which is the object of this paper, it is proposed to consider: how the experience of human nature arises; some obstacles to its realization; the relation of heredity to heritage; with a briefer mention of the mutability of human nature and the problem of individuality.

I

There is, then, first of all, this question: How did you and I get to be human, and how do others come to seem to be human? Every careful reader of Cooley and Mead has long been familiar with a clear answer to the first part of the question. One's consciousness of one's self arises within a social situation as a result of the way in which one's actions and gestures are defined by the actions and gestures of others. We not only judge ourselves by others, but we

literally judge that we are selves as the result of what others do and say. We become human, to ourselves, when we are met and answered, opposed and blamed, praised and encouraged. The process is mediate, not immediate. It is the result of the activity of the constructive imagination, which is still the best term by which to denote the redintegrative behavior in which there is a present symbol with a past reference and a future consequence.

The process results in a more or less consistent picture of how we appear, the specific content of which is found in the previously experienced social gestures. Not that all men treat us alike. It is trite to say that we have many selves, but it is profoundly true, and these are as many as the persons with whom we have social relations. If Babbit be husband, father, vestryman, school trustee, rotarian, and clandestine lover he obviously plays several different rôles. These rôles, or personalities, or phases of his personality are built up into a more or less consistent picture of how one appears in the eyes of others. We are conscious of ourselves if, when, and only when, we are conscious that we are acting like another. These rôles are differently evaluated. Some have a high, others a low, rating, and one's comparative estimation of the worth of his membership in his several groups has a social explanation, in spite of the fact that many would seek a physiological explanation.

As a banker or realtor Babbit may stand high, though as a golfer he may be a dub; his church status may be low and his club self high, and so through the list. The movements, vocabulary, habits, and emotions he employs in these different rôles are all accessible to careful study and accurate record, but the point can hardly be obvious since it is so widely neglected that the explanation of these habits and phrases and gestures that accompany the several rôles is to be sought chiefly in the study of the group traditions and social expectations of the several institutions where he belongs. No accessible inventory of his infantile impulses would

enable the prediction of the various behavior complexes concerned in the several personal rôles. Moreover, whatever the list of personalities or rôles may be, there is always room for one more and, indeed, for many more. When war comes Babbit will probably be a member of the committee of public defense. He may become executive officer of a law enforcement league yet to be formed. He may divorce his wife or elope with his stenographer or misuse the mails and become a federal prisoner in Leavenworth. Each experience will mean a new rôle with new personal attitudes and a new axiological conception of himself.

One's conception of one's self is, therefore, the result of an imagined construct of a rôle in a social group depending upon the defining gestures of others and involving in the most diverse types of personality the same physiological mechanisms and organs. Both convict and pillar of society, churchman and patron of bootleggers, employ receptors such as eyes, ears, and nose, and effectors including arms, legs, and tongue. The way in which these are organized is, however, only to be investigated by studying the collective aspects of behavior. Your personality, as you conceive it, results from the defining movements of others.

And if this be true it is *a fortiori* certain that our conception of other selves is likewise a social resultant. The meaning of the other's acts and gestures is put together into an imagined unity of organization which is our experience or conception of what the other one is. In Cooley's phrase, the solid facts of social life are the imaginations we construct of persons. It is not the blood and bones of my friend that I think of when I recall him as such. It is rather the imagined responses which I can summon as the result of my experience with him. Should misunderstandings arise and friendship be shattered, his nervous organization and blood count would probably remain unaltered, though to me he would be an utterly different person. Whether he be my friend or my enemy depends ax-

iologically upon my imagination concerning him. In order to deal with this material we must imagine imaginations.

The ability to conceive of human nature thus always involves the ability to take the rôle of another in imagination and to discover in this manner qualities that we recognize in ourselves. We regard as inhuman or non-human all conduct which is so strange that we cannot readily imagine ourselves engaging in it. We speak of inhuman cruelty when atrocities are so hard-heartedly cruel that we cannot conceive of ourselves as inflicting them. We speak of inhuman stupidity if the action is so far remote from intelligent behavior that we feel entirely foreign to it. And conversely, in the behavior of non-human animals and, in extreme cases, with regard to plants and even inanimate objects, there is a tendency to attribute unreflectively human motives and feelings. This accounts for the voluminous literature of the "nature fakers." To sympathize with the appealing eyes of a pet dog, or the dying look of a sick cat, or to view the last gasps of a slain deer is to have just this experience. Wheeler, a foremost authority on the behavior of insects, writes of "awareness" of the difference between her eggs on the part of a mother wasp, and of the "interest" that other insects take in the welfare of their progeny. The fables and animal stories of primitive and of civilized peoples could not have been spoken but for this tendency of our imagination to attribute human qualities when some behavior gives a clue of similarity to our own inner life. Examples of this process could be indefinitely cited from St. Francis preaching sermons to his "brother wolf" and to the birds, the romantic poets who speak to the dawn and get messages from the waves, the lover whose pathetic fallacy sees impatience in the drooping of the rose when Maud is late to her tryst, all the way to Opal, who loved the fir tree because he had an "understanding soul." The experience is entirely normal. The most unromantic mechanist may, in emotional moments, be carried unreflectively

into an unwitting and immediate attribution of human impulses and motives to non-human objects.

Human nature is, therefore, that quality which we attribute to others as the result of introspective behavior. There is involved a certain revival of our own past, with its hopes, fears, loves, angers and other subjective experiences which in an immediate and unreflective way we read into the behavior of another. The German concept *einfühlung* while not exactly the same notion, includes the process here denoted. It is more than sympathy; it is "empathy."

Now the process wherein this takes place is primarily emotional. The mechanism is operative in all real art. In our modern life the drama and the novel are largely responsible for the broadening of our sympathies and the enlarging of our axiological fraternities. There is some plausibility to the disturbing remark of a colleague of the writer who declared that one can learn more about human nature today from literature than from science, so called. If federal regulation continues to increase it might be well to pass a law forcing all parents of small children to read *The Way of All Flesh.* Books on criminology are valuable, but so is *The House of the Dead.* Culprits, offenders, and violators of our code are human, but in order that we may realize the fact it is necessary for us to see their behavior presented concretely so that we can understand and, understanding, forgive. "There, but for the grace of God, goes John Wesley." Perhaps you and I might have been murderers.

There is a curious, and at first, puzzling, difference in the attitude of two groups of specialists concerning the nature and the mental capacity of preliterate or so-called "primitive" peoples. The anthropologists and sociologists of the present day are almost unanimous in their opinion that so-called "savages" do not differ in their mental capacity or emotional possibility from modern civilized peoples, taken by and large and as a whole. Contemporary

biologists, on the other hand, are in many cases very reluctant to admit this, and many of them categorically and insistently deny it. Now it cannot be the result of logical conclusions from research methods of scientific men in the case of the biologists, for their work is confined chiefly to anatomical structures and the physiology of segments. Their conclusions arise from other than focal interests.

On the face of it the situation is curious. The biologist has long ago demonstrated the surprisingly essential identity of the nervous system in all mammals. The rat or the dog is almost as useful for the vivisectional investigation of the human nervous system as a human subject would be. Element for element, the nervous system of the sheep is the same as in man, the differences being quantitative. *A fortiori,* the nervous system of the Eskimo and the German are not significantly different. The biologist works with identical material, but concludes by assuming great and significant differences between the different races. The anthropologist and sociologist works with strongly contrasted phenomena. He discusses and studies polyandry, witchcraft, and shamanism, socially approved infanticide, and cannibalism, and such divergent practices that one would expect him to posit much greater differences than even his biologist colleague would assert. An investigator from Mars (one may always invoke this disinterested witness) would probably expect the biologist who studies identical forms to be inclined to rate them all alike, and might infer that the anthropologist who studies such divergent customs would place them in a contrasting series.

The explanation seems fairly apparent. The biologist deals objectively, thinking in terms of dissections and physical structures. The anthropologist deals sympathetically and imaginatively. His work takes him into the field where he gets behind the divergencies and finds that the objects of his study have pride, love,

fear, curiosity, and the other human qualities which he recognizes in himself, the differences being only in the form and expression. Thus, by an introspective sympathy, he comes to know them as human.

The limitations of introspective psychology need no elaboration in these days when extreme behaviorism has thrown out the infant with the bath. The uncontrolled exaggerations that arose out of the unverifiable imaginings of introspectionists brought about a violent reaction not wholly undeserved. It is not proposed here to make even a disguised plea for introspective methods. The essential point is not the desirability, but the inevitability, of just this type of imagination by which alone we recognize others as human, and which ultimately rests on our ability to identify in others what we know to be true in ourselves.

Imaginative sympathy enables us to recognize human nature when we see it and even to assume it where it is not. Conversely, when the behavior is so different that we lack the introspective clue we find difficulty in calling it human. Such limitation is more true of our emotional moments than of calm and reflective periods. Recent questions on race prejudice reveal the fact that, in the American group which was investigated, the most violent race prejudice, the greatest social distance, existed in respect of the Turks. It was further revealed that most of those who felt a strong aversion against Turks had never seen a Turk, but they had heard and read and believed stories of their behavior which account for the attitude. One story describes Turkish soldiers stripping a captured pregnant woman, betting on the sex of the foetus, and disembowelling her to see who should win the money. Such conduct we call inhuman since we cannot imagine ourselves as engaging in it under any circumstances. If we are to regard all members of the genus homo as human it is essential that the traditions of all races and their mores be sufficiently like our own to enable us to understand

them sympathetically. It is easy to show that Americans who go to Turkey and understand the Turks not only find them human, but often praise and admire them. And all because the emphatic imagination enables us to play their part and understand their motives.

II

The chief limitation to the imaginative sympathy enabling us to call others human is the phenomenon which Sumner calls ethnocentrism. By an extension of the term, which is here presented with a prayer for indulgence, we may distinguish three types of ethnocentrism which are in effect three degrees of the phenomenon. Ethnocentrism, as ordinarily used, is the emotional attitude which places high value on one's own customs and traditions and belittles all others, putting as least valuable those that differ most. The universality of ethnocentrism is evidenced from the discovery that all preliterate peoples who have considered the question have worked out the answer in the same terms. It is obvious to a Nordic that the African and Mongol are inferior to himself, and hardly less obvious that the Mediterranean is intermediate between his own highness and the low-browed tribes of the tropic forests. But for more than a generation it has been familiar to specialists that Eskimos, Zulus, and Pueblos have exactly the same feeling toward us. The customs with which we are familiar are best. Mores which differ most widely arise from the social life of an inferior people. We are supremely human; they are only partially so. To Herbert Spencer the high-headed and proud-hearted Kaffirs—who would in their turn have spoken contemptuously of his bald head and his helplessness in the forest—were intermediate between the chimpanzee and the English. They were only partly human. The writer of these lines once made what he felt to be a very good speech to an audience of naked savages, speaking in their own tongue with certain native proverbs and allusions to their folk-tales. The reward for this skill was the

frank and surprised admission that at least one white man was intelligent and could make a decent argument like any other human being. The Texas farmers whose province had been invaded by an agricultural colony of Bohemians used to refer to them as hardly human since their women worked in the fields and often the whole family went barefooted. Ethnocentric narrowness includes the group in sympathy-proof tegument which blinds men to the human qualities of differing peoples.

The second form of ethnocentrism is harder to establish, but must be asserted. It is seen in its quintessence in the writings of McDougall and his followers. Human nature consists of instincts and if a list of these be called for they are promptly produced. The instinct of warfare is axiomatic and the proof is found in the military history of our people. But the list of instincts turns out to be merely a renaming and hypostatization of our own social customs. The instincts have been set down in a fixed list because men failed to distinguish between their immediate social heritage and the inborn tendencies of their infants. It is therefore a kind of scientific ethnocentrism, which conceives as native and human that which is acquired and social and leads to the conclusion that those with widely different customs must either have some instinct omitted from their repertory, as McDougall plainly says of some of the interior Borneo tribes, or else (and this comes to the same thing) they have these instincts in a different degree from those which we have received from our forebears; that is to say, the customs of other people, if they are sufficiently different, are due to the fact that their nature is not quite like ours. They are really not quite human, or, to say the least, differently human.

The third variety of ethnocentrism is somewhat more subtle. It is the limitation due to language. It is the penalty for having to speak in one language without knowledge of the others. The dreary list of sentiments, feelings, and emotions in some books is written

as if all the words in the world were English words. We make sharp distinctions between fear, terror, and awe and, forgetting that these are limited to our vocabulary, expect to find the fundamental traits of human nature adequately described thereby. If we read German we may become interested in the distinction between *Mut* and *Tapferkeit*. Not knowing Japanese, we lose the precious insight which their idioms would give us in the inability of their language to make a neuter noun the subject of a transitive verb. A yet unpublished statement by a most eminent psychologist, written three months ago, is concerned with a discussion of "what emotions do" and "what intelligence does," in the behavior of human beings. No Japanese would make such an egregious blunder —not necessarily because of different capacity for analysis, but because his mother-tongue is incapable of such erroneous metaphysical reification. Linguistic ethnocentrism, if we may so name this, would disappear if our minds were competent and our years enough to allow us to know all the languages of the earth; but until utopia comes the handicap can be partly overcome by a conscious recognition of its existence and by an obstinate and repeated attempt to get outside of the limitations of our own etymology into a sympathetic appreciation of the forms of speech of stranger men.

Ethnocentrism, then, is essentially narrowness. It is enthusiasm for our own due to ignorance of others. It is an appreciation of what we have and a depreciation of what differs. It is essentially a lacking of sympathetic dramatization of the point of view of another. It must be transcended if we are really to know what protean varieties human nature may assume.

III

From the question of how human nature is recognized it is a natural transition to the problem of how it is constituted. The current form of most interest is an old problem still exciting lively

interest; the relation of inherited tendencies to social organization; the relation of instincts to institutions; heredity, to environment; nature, to nurture.

Current discussions of instinct reveal surprising initial agreements among authors who seem to be, and who imagine themselves to be, very different. Allport rejects instincts and McDougall has a fixed list (subject to periodical revision), yet both Allport and McDougall agree in making an uncriticized assumption that the customs and institutions of men are the outgrowth of the infantile and adolescent inherited impulses. Thus warfare is ascribed to the instinct of pugnacity, to which statement Allport objects and asserts that it is rather due to the conditioning of the prepotent reflex of struggling. It would be easy to make a long list of citations, but at random one may mention Parker, Trotter, and Bartlett. To such men the key to the understanding lies in an adequate genetic psychology. If we could only get at the infant and chart all his initial responses and impulses, they feel the problem of social organization would be solved.

This paper is written under the conviction that sociology and social psychology must rely chiefly on facts from the collective life of societies for their material. Two fields of inquiry, among many study of preliterate peoples and the other is the consideration of others, can be cited as providing relevant material. One is the modern isolated religious groups. There is found among primitive people such a protean variety of social and cultural organization, such various forms of religious, political, and family life, that it would seem impossible to account for them on the basis of definite instincts. When one society refuses entirely to produce children, another tribe kills all unbetrothed girls, still another practices infant cannibalism, while yet others manifest tender solicitude for all their children, and when unto these are added accounts of bizarre marriage customs and religious conceptions and tendencies, it is

hard to see how the conception can be carried through without assuming different instincts in each tribe.

The isolated religious sects of the eighteenth and nineteenth centuries are even more valuable to the theorist since the complete history of many of the customs is known, an advantage not possessed by the ethnologist as a rule. It is possible to describe in detail a time when there were no Quakers, Dunkards, Mormons, Shakers, or Perfectionists. The rise of polygamy can be traced in Mormonism, and the abandonment of the marriage relation among the Shakers can be dated and described.

McDougall has seen this difficulty and has met it with a certain *naïveté*. He has only to assume that strikingly different customs have been produced by peoples with differing instincts, or with instincts of different degrees of strength or intensity. The Shakers would therefore be adequately explained by assuming a selection of people who had no sex instincts, or very weak ones. The peaceful tribes would be those lacking the instinct of pugnacity, which leads him to the logical conclusion that the French have a different instinct from the English, and to the popular psychology which gives to the Anglo-Saxon the instinct for representative government which the Italians and Orientals are assumed to lack.

Thus the assumption that instincts produce customs turns out to be a mere tautology, and the human race disappears as a biological species. A zoölogist who describes the migrating salmon or the breeding habits of seal or the incubating instincts of penguins is dealing with a single species whose members exhibit a universality of action. But if this formulation of instincts be followed out, every tribe or race must be assumed to have different instincts, and the basic error of the whole instinct psychology stands revealed. Then instinct merely becomes another name for custom.

Were all our knowledge of human nature limited to a single flash of information through a given moment of time it might be

impossible to criticize this serious error. Fortunately, there is history. The Mormons began without polygamy, lived through a long period when plural marriage was customary, and then, through the stress of circumstances, abolished the practice. The English colonies have circled the earth, while the French remain at home drinking in the cafés of Paris, but there was a time when the French colonies occupied vast territories in the New World, and there is ample evidence of a considerable settlement of French both in Canada and Louisiana. The warlike Nordics dreamed of a heaven of warfare and slaughter, but when Norway seceded from Sweden something went wrong with their fighting instinct and, obstinately enough, they settled the matter by a peaceable arrangement. If customs change, and they do, and if instincts cause customs, then instincts change as often as the customs. But a changing instinct is no instinct, for instincts by hypothesis are constant.

The problem of social origins is not solved, but the history of many customs and institutions is in our possession and it is quite certain that the whole concatenation of unique and unrepeated circumstances must be invoked to explain the creation of any one of them. And when once the organization appears, the new members of the group who grow up within it or who are initiated into it take on the group attitudes as *représentations collectives,* securing all their fundamental satisfactions in ways which the group prescribes. The true order, then, lies in exactly the reverse of the instinct-to-institution formulation. Instead of the instincts of individuals being the cause of our customs and institutions, it is far truer to say it is the customs and institutions which explain the individual behavior so long called instinctive. Instincts do not create customs. Customs create instincts, for the putative instincts of human beings are always learned and never native.

Exactly when human nature begins is a problem. But that it does, in each individual, have a definite beginning is an axiom. The

newborn has not a developed personality. He has neither wishes, desires, nor ambitions. He does not dream of angels nor think the long thoughts of youth. He acquires a personality. He does not acquire his heredity. He acquires his personality. A quarter of a century ago this acquisition was shown by Cooley to happen in the first groups, the primary groups, into which he is received. He becomes a person when, and because, others are emotional toward him. He can become a person when he reaches that period, not always exactly datable, when the power of imagination enables him to reconstruct the past and build an image of himself and others.

IV

An inescapable corollary of the foregoing is the mutability of human nature. Despite the chauvinists, the cynics, and the absolutists of every sort, human nature can be changed. Indeed, if one speaks with rigorous exactness, human nature never ceases to be altered; for the crises in life and nature, the interaction and diffusion of exotic cultures, and the varying temperaments possessed by the troops of continuously appearing and gradually begotten children force the conclusion that human nature is in a continual state of flux. We cannot change it by passing a law, nor by a magical act of the will, nor by ordering and forbidding, nor by day-dreaming and revery, but human nature can be changed. To defend militarism on the ground that man is a fighter and the fighting instinct cannot be changed is merely to misinterpret and to rationalize an important fact; that the custom of warfare is very old and can be abolished only gradually and with great difficulty. To assume that the drinking habits of a people or their economic structure or even the family organization is immutably founded upon the fixed patterns of human nature is to confuse nature and custom. What we call the stable elements of human nature are in truth the social attitudes of individual persons, which in turn are the subjective as-

pects of long-established group attitudes whose inertia must be reckoned with but whose mutability cannot be denied. Having been established through a long period of time, and appearing to the youth as normal and natural, they seem to be a part of the ordered universe. In reality they are continually being slightly altered and may at any time be profoundly modified by a sufficiently serious crisis in the life of the group.

The history of social movements is but a record of changing human nature. The antislavery movement, the woman's movement, the temperance movement, the interestingly differing youth movements in Germany, China, and America—these are all natural phenomena in the field of sociology, and are perhaps most accurately described as the process of change which human nature undergoes in response to the pressure of unwelcome events giving rise to restlessness and vague discontent. Such movements, when they generate leaders and develop institutions passing on to legal and political changes, create profound alterations of the mores and thoroughly transform not only the habits of a people and their nature as they live together but also the basic conception of what constitutes human nature. The present conception in the West of the nature of woman, including her mental capacity and ability to do independent creative work, is profoundly different from the conception which anybody entertained in the generations before the woman's movement began.

But for the limitations of space the problem of individuality and character should receive extended treatment in this discussion. This being impossible, a brief word must suffice. There is so much of controversy here and so much of confusion that many seem to be hypnotized by mere phrases. It is much too simple to say that the individual and society are one, for it is difficult to know which one. The heretic, the rebel, the martyr, the criminal—these all stand out as individuals surely not at one with society. Nor does

it seem adequate merely to say that the person is an individual who has status in a group. For it does not appear that before the acquisition of status the individual has any existence. Certainly if he has he does not know it. The conception which it would be profitable to develop lies in the direction of the assumption that out of multiple social relations which clash and conflict in one's experience the phenomenon of individuality appears. The claims of the various social groups and relations and obligations made on a single person must be umpired and arbitrated, and here appears the phenomenon of conscience and that of will. The arbitrament results in a more or less complete organization and ordering of the differing rôles, and this organization of the subjective social attitudes is perhaps the clearest conception of what we call character. The struggles of the tempted and the strivings of courageous men appear, when viewed from the outside, to be the pull of inconsistent groups, and so indeed they are. But to you and me who fight and hold on, who struggle amid discouragement and difficulties, there is always a feeling that the decision is personal and individual. Someone has been the umpire. When the mother says, "Come into the house," and Romeo whispers, "Come out onto the balcony," it is Romeo who prevails, but it is Juliet who decides.

Individuality may then, from one standpoint, be thought of as character, which is the subjective aspect of the world the individual lives in. The influences are social influences, but they differ in strength and importance. When completely ordered and organized with the conflicting claims of family, friends, clubs, business, patriotism, religion, art and science all ordered, adjudicated, and unified, we have not passed out of the realm of social influence, but we have not remained where the social group, taken separately, can be invoked to explain the behavior. Individuality is a synthesis and ordering of these multitudinous forces.

Here human nature reaches its ultimate development. Henley,

lying weak and sick, suffering great pain, called out that he was captain of his soul. To trace back the social antecedents of such a heroic attitude is profitable and germane, but it is never the whole story until we have contemplated this unique soul absolutely unduplicated anywhere in the universe—the result, if you like, of a thousand social influences, but still undubitably individual. It was Henley who uttered that cry. That you and I so recognize him and appreciate him only means that we also have striven. We know him and understand him because of our own constructive, sympathetic imagination. He who admires a masterpiece has a right to say, I also am an artist.

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THE PROBLEM OF PERSONALITY IN THE URBAN ENVIRONMENT

I am assuming that habit formation is mainly responsible for the behavior traits of individuals, races, and nationalities, that these traits change much as fashions in dress, and almost as freely, only within decades and centuries instead of seasonally, and that dispositional traits, while they certainly do exist, are not distributed in blocks to national and racial groups, but rather to individuals in various proportions, so that there is an assortment of temperaments in all groups, seeming uniformities like the phlegm of the Englishman and the explosiveness of the Italian being mainly due to habit formation and the tendency of all dispositions to conform themselves to the prevailing fashion.

There are, in fact, two great techniques for getting our effects —composure and agitation. Each has its merits, and any group may be predominantly conditioned in either direction. I shall speak presently of the Poles, a Slavic group, which is more agitated, if anything, than the Italians—has, in fact, been called the "Dancing Slav," *Slavus Saltans,* in punning allusion to some statue in Italy, but I conceive that with a different historical conditioning the Poles would have become as composed as the American Indian. It is idle, indeed, to speak confidently of biologically determined behavior tendencies in races and nationalities as a working idea when we see daily that the social distance and the disparity of attitudes between American parents and children—or, shall we say, grandparents and grandchildren—is, generally speaking, greater than the same differences between nationalities—say, the Swedes and the English, or even the Americans and the Japanese. A New York father was reported as saying he was gratified by the fact that his children still spoke to him.

Now, it appears that behavior traits and their totality as represented by the personality are the outcome of a series of definitions of situations with the resulting reactions and their fixation in a body of attitudes or psychological sets. Obviously, the institutions of a society, beginning with the family, form the character of its members almost as the daily nutrition forms their bodies, but this is for everybody, and the unique attitudes of the individual and his unique personality are closely connected with certain incidents or critical experiences particular to himself, defining the situation, giving a psychological set, and often determining the whole life-direction. An example of this was given two winters ago by the scenic artist, Bakst, who narrated a circumstance leading to his artistic conditioning. At the age of four he was taken by his parents in St. Petersburg to hear Madame Patti. In the course of the opera the prima donna drank poison and fell. At this point the boy protested uproariously, and after the performance he was taken to Patti's dressing room to be reassured. She took him on her knee and with her make-up materials drew long black brows and long red streaks on his cheeks. At home they began to wash his face, but he wouldn't have it. He went to bed with the make-up on, and, psychologically, this make-up was never washed out; his artistic style was modeled after the make-up of his own face.

I am the more impressed with the incident in the life of the individual since reading the records of a number of psychoneurotic personalities. It is surprising to find how many persons are conditioned to a life of invalidism by a single incident, and apparently the same principle is valid in normal life. I believe many of you will be able to confirm this in your own experience.

But an incident may contain a totally different meaning for different persons; its effect in a given case will depend on the totality of the experience of the individual and the type of organization of the experience in memory at the moment. We know certainly,

from the cases of dual and multiple personality, if in no other way, that memories tend to arrange themselves in blocks or groupings, each group maintaining a certain integrity, somewhat as we arrange studies in a curriculum, and I have called any group of experiences hanging together in the memory, within the totality of experience, an experience complex. The dependence of these experience groupings on our institutions and customs is also evident, but, since the institutions are eventually formed by the wishes, it is more important to view this problem from the standpoint of the wishes, meaning by this nothing Freudian, but simply what men want. I expect that much light will be thrown on this matter of the experience complex and its relation to the development of personality by the surveys being carried on by Park, Burgess, Bogardus, and others, and by the documents and life-records which the social psychologists are assembling.

But the human race lives by tradition, largely. The point which Child emphasizes in his great work, that the organism is never again the same after a given stimulus, holds with us also, and over a vast stretch of time. Our behavior is historically, as well as contemporaneously, conditioned, and I will devote the middle part of my present time to an outline of the process by which certain experience complexes and behavior reactions were historically developed in a selected national group, namely, the Poles; more specifically, the Polish immigrant.

The Polish peasant who comes as immigrant to America has as one element of his background perhaps the most elaborately developed and hierarchized aristocracy of Europe. The Polish state was originally a nobility state, none participating who did not do military service. Immigrants from the West, Germans and Jews, were excluded, and consequently there was no *bourgeoisie*. Other classes than the nobles were treated as "political minors." The nobility family was an agnatic organization—kinship through the male line

only. Military life, achievement, glory, distinguished males. There was great sensibility as to relationship and status. Every individual was expected to know for many past generations all the connections between his family and others, and at least the most important connections of the families connected with his own. While the peasants did not enter this world, it was, or became latterly, a region for phantasying, the more so as some peasants had been made petty nobles on the field of battle. You may see them now sitting somewhat apart at social gatherings, often poorer than the others, but wearing gloves.

It was also a fundamental tendency of the great nobility to avoid all positive political obligations usually imposed by the state. They held themselves above the state and above the law, but wished to give service voluntarily, felt an obligation to make meritorious and distinguished sacrifices, though repudiating any theory of compulsion. The king of Poland was a sovereign presiding over sovereigns. In this connection the Polish nobleman developed a great ostentation, magnificence, grandiosity, and graciousness. Also certain bizarre, excessive, and almost incomprehensible attitudes. It is hardly too much to say that to the Pole the only meritorious actions are those of a supererogatory nature: not demanded and not useful. Notoriously they have fought everybody's battles more consistently than their own. I have in mind John Sobieski and the Turks; the fact that the Polish kings were obliged to fight the Teutonic order largely with Bohemian mercenaries; the exploitation of the Poles by Napoleon; the behavior of the Polish regiments in the Prussian army during the Franco-German War, who took a French position in an attempt so suicidal that German tacticians would not engage their own troops, on the sole condition of being permitted to wear on this occasion the white eagle, forbidden emblem of Poland. These traits were not produced by the partition of Poland;

they were, rather, the cause of the partition. But the partition added a frenzy to their expression.

Unconsciously, then, and consciously all classes of Polish society have been deeply marked by this distinction-seeking of the nobility. A large Polish estate, say that of the Lubomirskis, may have as many as 1,500 servants, and these will arrange themselves in twenty or more categories of superior and inferior. Scholars and artists are affected in the same way. I have the autobiography of a distinguished Pole, himself of the small nobility, whose life has running through it as the constant motif either to penetrate the great nobility directly or to find an equivalent distinction in some activity. First, marriage was arranged with a daughter of the great nobility, but that was abandoned because it would not get him in. Then followed art; then, the salvation complex; and finally, scholarship. The superb achievements of the Poles in art and science might have been accomplished otherwise, but these achievements always seem, in a way, surrogates for that distinction which was originally nobility of family. With the Pole it is not utility selection, not so greatly hedonistic selection, but mainly recognition selection. Almost any sort of distinction seems pleasing to a Pole. I read at one time the manuscript of a Polish philosopher who was essaying a volume in the English language, and I was of course, reading it solely with regard to the correctness of his language. But at one point I remarked: "You know, I do not in the least understand what you are talking about." I felt that this was somewhat blunt, but it was a source of pleasure to him. If I did not understand it, it would do very well.

A logician in Warsaw addressed an audience of perhaps a hundred, beginning early in the evening and continuing until 3 A.M. Gradually the audience faded away until only three remained, and the reaction of the lecturer to this was distinctly pleasurable. Not

many lecturers, he said, could talk above the heads of so many people for so long a time.

When the movement for enlightenment began to affect the peasant, among his first reactions were those seeking distinction. There were, for example, several newspapers established for the benefit of the peasant, and communications from him were encouraged. I examined at one time about 8,000 of these, and more than half of them were in poetry. There is hardly a peasant who can write at all who does not write poetry. I remember also reading a letter written from Mukden to a newspaper by a Polish soldier during the Russian-Japanese War. At the end he said he had not written to his wife, but hoped that this communication would come to her attention. At another time I was in the office of the *Gazeta Swiateczna* in Warsaw when a young peasant entered and reproached the editor for not printing a poem he had sent in. The editor pleaded that the poem was not sufficiently meritorious. The writer finally admitted this, but added that there had been a death in his community, and that he wished the editor to mention the fact and say that he had his information from the caller, in order that he might at any rate see his name in print. Narration is developed to the point of an art among the Poles; many of them are fascinating *raconteurs*. I had as guests two famous *raconteurs,* one older and one younger. The older held the table spellbound for two hours. Finally the younger, after some vain attempts at interruption, appealed to me in a whisper and said: "We shall never stop him unless we change the room." And we changed the room.

Now the indirect aristocratic conditioning of the peasant who comes to us as immigrant is not nearly so deep as the conditioning by family and community, and that is a point which I do not need to elaborate here. Nevertheless the familial attitudes tend to disappear rapidly in America, while the aristocratic ones tend to blossom out. At first the boy writes home: "Dear parents, I have work.

I send you 75 rubles. I can send you much money." After some months, or a year, he writes: "Dear parents, I like to send you money, but you ask too much." A boy in South Chicago writes: "Dear parents, I kiss your hands, and I inform you that it is difficult to live without a wife. Will you send me a girl, one suitable to my condition, for in America there is not one single orderly girl." The parents reply that they are sending one of the Malinowski girls. The boy kisses their hands again, writes some news, and at the end of the letter inquires: "Dear parents, are you sending Stanislawa, the taller one, or Hanka, the shorter one?" This boy was killed in the steel works before his bride started, but another boy, who had been here longer, writes: "Dear parents, you speak of marriage, but in America it is not necessary to marry at all."

On the other hand, the aristocratic attitudes which there were in the *hinterland* of consciousness tend here to enter more actively the region of phantasying, especially since America is conceived as the land of absolute freedom. Frequently, therefore, the immigrant boy appears here with somewhat grandiose expectations and gestures. A Polish youth writes:

> When I came to America I brought nine extra suits of clothes. . . . . My first job was in a factory where they painted ribbons for typewriters. . . . . My ten suits were soon spoiled, for I was ashamed to wear overalls. Finally the only suit I had was a Prince Albert affair, and I went to work in that. I remember passing a line of fellow-workers, leaning against a wall and smoking their pipes. When they saw me coming in my Prince Albert they took their pipes out of their mouths and bowed low, saying "Me Lord" as I passed.

You will say that he is most certainly jesting, making fun of himself. And that may be true, but I am sure also that he had his satisfaction, and still has it, in the fact that he was called "My Lord."

Another determining factor in the behavior of the immigrant is American lawlessness. Translations of American dime novels are

popular in Poland, stories of American freedom and banditry are carried back by returning immigrants, the grandiosity of the Polish aristocracy preadapts the consciousness of the immigrant boy to some spectacular exhibition of his freedom, and the copy may be banditry. In the first letter written home a certain immigrant said: "I am walking on North Clark Street. I have a revolver. Just let anybody give me a dirty look." Four Chicago boys, one of them not a Pole, decided on a holdup. They met a farmer in the early morning coming in with a load of garden truck. He gave over his watch and money. This did not seem satisfactory; they held a conference and decided to kill him; and so they did. Even this did not seem a very distinguished exploit, not harrowing, so they cut off a piece of his leg and stuffed it in his mouth. They were very young, but they were all hanged on account of the last act of atrocity.

Generally speaking, I should say that the Polish immigrant tends to be a dissociated personality, a consciousness divided, like all Gaul, into three parts, as result of three dominant experience complexes—the community conditioning, the aristocratic conditioning, and the conditioning by American freedom—in terms of the wishes, desire for stability, desire for recognition, and desire for new experience. These features are not all, but they are outstanding. It is on this account that the behavior of the Pole newly come to America is so completely incalculable. You can never know, under a given stimulus, which experience complex will come to the front and determine the behavior reaction. A policeman may enter a public place where there is loud noise and call for quiet. The place may become silent as a tomb, or one of the men may draw a gun and shoot the officer—on the one hand, the older conditioning to the authority of the home, the upper classes, and the Russian police; on the other hand, the newer conditioning to freedom. Two men exchanged some blows one evening in a boarding-

house. One of them went to work in the morning. The other, a night worker, slept. About ten o'clock in the morning it occurred to the day worker to go back and kill the night worker. He did this, putting a pistol to his ear, and returned to work. After some days of excitement, during which no suspicion was directed toward the murderer, he simply appeared and said: "Why, I killed that man." He felt that he was being cheated of his distinction. The police call behavior of this kind "Polish warfare." During the war Paderewski and others were addressing an audience of Poles. The previous speakers had been annoyed by the noisy behavior of the audience. When Paderewski rose his first words were: "Be quiet, cattle!" There was no more noise. The speaker had used an old expression of the Polish nobleman as applied to the peasant. Perhaps he took a chance. If the freedom complex had come to the front there might have been trouble.

I have spoken at this length of an immigrant group not because I think the immigrant is the chief problem in the city environment. Evidently the chief problem is the young American person. The immigrant is never assimilated anyway. He becomes here something else, but not an American. If he returns, say, to Poland, he has to be re-Polonized, and that never happens either. He becomes still something else, but not a Pole. The second-generation immigrant becomes nearly an American, but is still somewhat conditioned by the adult family habits, while the third-generation representative (if the family has not encountered too much race prejudice) is practically just an American child. So the problem becomes again one of the child.

The problem of the immigrant and the child is the same in this respect: that the American child is as alien to the standards of the older generation, generally speaking, as the immigrant is alien to America in general, and in this connection the frequently complete resistance of the older generation to change (seeking stability)

seems as much out of place as the partial demoralization or incomplete organization of the younger generation (seeking new experience).

The ethnogeographers speak of a moving environment in connection with those tribes which have to emigrate with the seasons, in pursuit of grass and water, and psychologically we are also living in a moving environment, so that the question of the formation, balance, and interaction of the experience complexes becomes more acute, especially in the urban environment. It is investigation along this line, as it seems to me, that will lead to a more critical discrimination between that type of disorganization in the young which is a real but frustrated tendency to organize on a higher plane, or one more correspondent with the moving environment, and that type of disorganization which is simply the abandonment of standards. It is also along this line, and I refer still to the study of the experience complexes, that we shall gain light on the relation of fantastic phantasying to realistic phantasying—a question, as Professor Giddings has pointed out, which deserves our attention, and which is one of the outstanding points in the wild behavior of the Poles which I have outlined above.

It will prove true, I think, that demoralization is the result of the formation of experience complexes which are nevertheless not integrated or organized among themselves sufficiently to secure behavior reactions corresponding with reality or with existing social values; that for the most part disorganization is a transitional stage between two forms of organization, and that the element of phantasy may contribute either to disorganization or to a higher type of organization.

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SOCIAL DISTANCE IN THE CITY

Despite the physical proximity of city people, social distance prevails. The lack of fellow-feeling and understanding which characterizes social distance is everywhere evident in cities. The capitalist and labor-unionist mutually denouncing each other are displaying social-distance traits. The wealthy landlord and the dwellers in the former's congested and perhaps insanitary tenements are separated by wide social distances. The hod-carrier and the society débutante manifest little understanding of each other. Tipping, a city custom, implies social distance, for one rarely tips his peers. Tipping signifies difference in status and hence denotes social distance.

The cleavages between city-bred children and their parents, between city-influenced children and their rural-trained elders, are increasing. The existence of boys' predatory gangs, of high juvenile-delinquency rates, and of crime waves in cities is an index of social distance. Race riots are chiefly urban phenomena revealing social distance. Descriptions of the large city as the "lonesomest spot anywhere," or as "the most unsocial place in the world," are expressions of social distance.

I

In order to measure and interpret social distance a list of seven social relationships has been worked out, and sixty persons of training and experience have been asked to rate these in order of the fellow-feeling and understanding that ordinarily exists in each. These social relationships, arranged according to the judges' verdict in order of decreasing fellow-feeling and understanding, may be indicated as follows: (1) To admit to close kinship by mar-

riage; (2) to have as "chums"; (3) to have as neighbors on the same street; (4) to admit as members of one's occupation within one's country; (5) to admit as citizens of one's country; (6) to admit as visitors only to one's country; and (7) to exclude entirely from one's country.

In the next place a list of the important racial and language groups living in the United States was submitted to experimental groups of native-born Americans living in cities and numbering 450. These urbanites were asked, on the basis of their first-feeling reactions, to put crosses under each of the seven social relationships to which they would admit members of each race (beginning with Armenians and ending with the Welsh), as a class, and not the best or the worst of each race they had known. If a person had no "first-feeling reactions," no marks were to be made.

As a result, for instance, the Armenians and other races such as the Negroes, Chinese, Hindus, and Turks were admitted by only a few of the 450 persons to the first three social relationships in the list of seven, and were put by many into social relationships 4 and 5, and by a substantial number into social relationships 6 and 7. On the other hand, races such as the English, French, Norwegians, and Scotch were admitted more or less freely to each of the first five social relationships, and were put by scarcely anyone into social relationships 6 and 7.

When we consider these two groupings (which for convenience may be called A and B, in the order given) we find that the races in group A are doubly handicapped in their social relationships with the 450 urban people as compared with the races in group B. They are allowed social contacts in a far less number of social relationships than are the races in group B, and moreover, these limited social relationships exist at a considerable social distance. The opportunities for assimilation open to group A are measurably smaller

than for group B. Likewise, the chances for the rise of misunderstanding, ill-will, and conflict are measurably greater.

An examination of the racial origins of the 450 city-dwellers whose first-feeling reactions have been recorded shows that few were of group A descent, while 85 per cent claim group B descent, and that in nearly all cases where racial heritage connections are prominent, social distances are short, and that the connections which exist between heritage and distances are measurable. Where racial-heritage connections are missing, the first-feeling reactions are usually accompanied by long social distances, but the exceptions to this statement are somewhat numerous and require further research.

Data now being gathered from urban people of races other than American show social-distance reactions similar in principle to those already noted, but different in details. For example, while Americans put the Turks at the greatest social distance, the Chinese put the English at a greater social distance than any other race; and the Jews, the Poles, and so on. Nearly all feel that Americans have a racial-superiority complex, and resent it.

1. "Let the Chinese be damned of body and soul" has been the byword of the English toward my innocent people for more than half a century. Although one of the oldest and most outstanding Christian nations of the world, she has poisoned the body and mind of the Chinese through the opium traffic. She is continuing this treachery with greater effort. This is unthinkable; that a God-fearing, out-and-out Christian nation is peddling a drug of that nature in this day and age. I cannot tolerate hypocrisy in any individual; then should I tolerate it in a nation as such? Decent society outlaws dope peddlers; therefore decent civilization in like manner should outlaw nations as such.

2. They [the whites] fear the inevitable progress of the darker races. Prejudice is bringing the very things they are fighting. With white skin, one can have education and positions and better jobs and more comfortable homes. They have more freedom to enjoy life, without being humiliated always. With freedom they need just an ambition, and then all gates are open that are otherwise closed to us.

3. I do not judge people by race or nationality. I consider the individual only, and I like or dislike them for the qualities I find in them. But I guess I like the white people least of all. They are always so full of prejudice and hatred to other races. They are so unjust and inhuman when it comes to other races. And the worst of it is, they spread their prejudices to others.

4. In high school, prejudice kept me from finishing my last year. If I am hungry, I cannot eat at public places unless owned by one of my own people. If I'm thirsty, I cannot drink in any place but one of my own, no matter how I conduct myself, or how I look. In fact, my face is treated as if it were a race of lepers or rattlesnakes.

5. We want to be treated as human beings; as citizens with citizens' rights. We expect to be punished when we're wrong, but we want protection when we're in the right. We want the freedom of public places. For instance, the street is public; in the same way, all public places should be open to everyone.

II

In order to secure a more accurate idea of how the racial-distance reactions of native-born city people change, the following experiment was made (Table I); it opens a large field for exploration.

TABLE I

CHANGES IN SOCIAL-DISTANCE REACTIONS BY 110 URBAN AMERICANS

Toward Following Races (Samples)	More Favorable	Less Favorable	No Change
Armenians	23	9	78
Chinese	19	10	81
Germans	6	34	70
Hindus	3	11	96
Japanese	23	19	68
Mexicans	15	22	73
Scotch	0	0	110
Turks	1	16	93

The relatively large figures in column 3 indicate that changes in first-feeling reactions take place slowly—more so than might be anticipated. Through personal interviews materials are at hand which explain these changes. The numerous "no changes" are the

result either of no racial contacts and experiences or else of possessing attitudes so fixed for or against various races that the habitual reactions are adamant to all ordinary racial experiences. One is likely to have such favorable convictions concerning his own race, and such an antipathy toward at least a few other races, that current experiences do not change him.

The "more favorable" changes, as noted in column 1, are often due to personal experiences of a pleasing nature with a few representatives of the given races. If a person has previously had a neutral attitude, then a few pleasing experiences will suffice; but if he has had an unfavorable attitude, then many pleasurable experiences will be necessary in order to produce a "more favorable" opinion.

On the other hand, an unpleasant experience with a single Armenian, for example, will quickly change a person's first-feeling reactions from neutral to unfavorable. The figures in column 2 are to be accounted for, usually, by one or a few unfortunate experiences or by a few adverse hearsay experiences. A person's social-distance reactions shift according to the unpleasant or pleasant nature of personal experiences.

III

An analysis of the occupational activities of the 450 city people who co-operated in this experiment shows substantial groups of business men, social workers, and public-school teachers. As a whole, the business men record somewhat greater social-distance reactions toward nearly all races than do social workers. In turn, the social workers likewise record somewhat greater social-distance reactions than do public-school teachers. Additional data are necessary, although recently acquired occupational data have not changed earlier findings. Apparently, special social-distance reactions accompany each occupation according to the particular experiences which are common to it. The business men are engaged in

"a getting and profit-making" occupation, as distinguished from social work and teaching, which are "giving and non-profit-making" occupations. Social experiences on the former basis, less likely to be favorable than on the latter, create greater social distances than the latter. Social workers are dealing with adults, primarily, while teachers are working with children, who are likely to be more responsive, a situation which partly accounts for the shorter social-distance reactions of teachers than of social workers.

IV

The chief significance of social distance is its relation to social status. For example, Japanese immigrants are desirous of improving their status and, when possible, move out of "Little Tokio" into a neighborhood occupied by natives, but in so doing they get "out of place." Hence, they irritate people who want an established order. They, however, are more willing to take rebuffs than to accept inferior status. Distance usually means inferior status. Attempts to climb up from the lower-status levels brings persecution and conflict. The dilemma is the choice between inferior status and peace on one hand, or recognized status and conflict on the other.[1]

"Invasion" is a key to a great deal of the social distance that exists between the native-born and immigrants in cities. As long as races stay in ghettoes or Little Italy's, they are "all right," but when their members "invade" the "American" neighborhoods, new social-distance reactions are at once generated against them. The speed at which this invasion is undertaken bears a direct relation to the rise of social-distance feelings. Likewise, the difference between the culture forms of the "invaders" and of the natives is an index

[1] Our national exclusion law, barring the Japanese altogether, is interpreted by Japanese as lowering their status in the eyes of the world. They are put at a greater distance than European races, and hence they feel, as we would if in their places, on a lower level. This increasing of social distance by legislation is interpreted as a demotion in status—something which is intolerable to a proud people.

to the probable rise of social-distance attitudes. To the extent that the native feels that his status has been lowered by the invasion of his neighborhood or his occupation by immigrant people, to that extent his social-distance attitudes are inflamed.

Social distance results from the maintenance of social status, that is, of the *status quo* in social relationships. A person, by keeping others at a distance, maintains his standing among his friends. One can bear the loss of almost anything in life easier than loss of social status, hence the *raison d'être* for maintaining social distances.

Personal status has usually originated in force, and social distance likewise has been established by force, war, misrepresentation, and subtle propaganda devices. The status of groups has usually been determined in the same manner. Moreover, any group or person will ordinarily fight to maintain status, once it has been achieved—even when acquired unjustly. They will usually struggle to improve status, although perhaps by less direct means. Status and social distance are precious partly because they have usually been struggled for. When status is once achieved, it is maintained until a successful challenger appears. But this is an unstable basis for the group, so that we find status and distance ingrained in laws, hereditary procedure, a social caste system, and the mores, and thus made relatively permanent.

If a metropolite would "get ahead" he usually must become "aggressive," but aggressiveness on the part of one person or of a group is often an invasion of the status of other persons or groups. Hence social-distance reactions are kept in turmoil. To the extent that a city is composed of aggressive persons, eager to succeed, social-distance attitudes will be kept active—despite the fact that physical distances have been largely overcome.

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A SOCIAL PHILOSOPHY OF THE CITY[1]

This paper is an attempt to see the unity of city life, and lays no claim to scientific validity. It is frankly metaphysical in nature and philosophical in method. It aims at an interpretation of the manifoldness of city life in terms of the sociological structure as its symbol and cause. It purports to be an illustration of sociological determinism, and it is offered as one of many possible alternatives to the economic determinism so prevalent in modern thought.

But an interpretation of city life, if it is an interpretation of the life of big cities, becomes more than a mere philosophy of the town. It becomes a philosophy of the culture which produces these cities. As long as towns are small and insignificant the rural life is the creator of cultural values. Under these conditions the town is but a market, serving rural ends. With the growth of the city the positions change. Not only does the town obtain a life of its own, but it begins to dominate the country, until finally the city has grown to a metropolis and becomes the cultural sovereign of the country, setting the fashion not merely in dress and manner, but in all aspects of life. In so far as our Euro-American culture is a city culture, in so far will a sociological interpretation of the city be a sociological interpretation of the whole of that Euro-American culture.

The brief statement presented here is an abbreviated form of a larger study. All specific illustrations and concrete instances have

[1] The writer wishes to acknowledge his indebtedness to Georg Simmel and Oswald Spengler. For Oswald Spengler, see *Untergang des Abendlandes* (München, 1922), II, chap. ii, "Städte und Völker," 101–31. For Georg Simmel, see "Die Grosstädte und das Geistesleben," pp. 185–206 in *Die Grosstadt: Vorträge und Aufsätze zur Stadteausstellung* (Dresden, 1903), a symposium edited by Zahn and Jaensch.

been omitted, and this paper is, therefore, offered rather as a sketch of a sociological philosophy than as an actual interpretation in such terms.

THE SOCIOLOGICAL STRUCTURE OF THE CITY

The first and most obvious distinction between the rural and the urban community is that of size. The second, and not less significant, dissimilarity lies in the quantity of social contacts in which the average inhabitant of the two communities normally participates. These two characteristics together, the size of the social circles and the quantity of social contacts, give city life its peculiar quality of complexity and manifoldness.

The community life of primitive man and of the village inhabitant is based on a primary group, that is, on face-to-face contact. It means intimate relationships, spontaneous accommodations, and identification of the self with the group. In the city all this has changed. A large part of social life comes to be lived in terms of secondary contacts and associations. The community to which the city man belongs has become so large that it has ceased to be an immediate experience.

This receding of the community from the actual daily life of the individual means a weakening of the immediate and spontaneous social restraints and a new form of social control by means of law. But although the law with its public sanctions may bind the individual more strongly, it binds much less of him. A large sphere of behavior is thus freed from immediate restraint, and in this the individual is allowed an opportunity for differentiation and specialization.

ASSOCIATIONS

But this increased individual differentiation finds again expression in a social form. There arise numerous associations on the

basis of specialized interests differentiated out of the total community life. The city man substitutes a social life in associations for the community life which has lost its social effectiveness.

The small community touches the individual in all aspects of his personality and demands his exclusive loyalty. The association touches only certain aspects of his personality, demands only a limited participation, and leaves him free to enter into innumerable other associations. On an associational basis he can express his individual uniqueness in social forms and yet feel free from hampering social restraints because the restraints thus incurred are of his own choosing.

ASSOCIATIONAL NATURE OF PRIMARY GROUPS

Nevertheless, the city dweller is not innocent of primary group life. Far from it. He has his family, his club life or his gang, and his immediate social circle. But this primary group life differs in two important aspects from the similar contacts of his rural brother. It is to a large extent a social environment of his own choosing, and it requires a more conscious participation. In the village even the social environment of the adult is largely a predetermined environment. In the city the individual has a great many circles from which to choose, but he must win his right to membership. His acceptance will more often depend on what he does than on what he is.

It is characteristic of the city environment that its primary group life, not excepting the family, partakes more of the characteristics of associational than of community life. This means a predominance of rational, purposive living in terms of individual interests, rather than the unconscious dissolution of the individuality in the life of the group, which is characteristic of small communities.

NUMBER OF CONTACTS

It is not merely in the quality of his relationships that the city dweller differs from his rural brother, but also in the quantity. Owing to his greater mobility his associations are more numerous. On the street, in the subway, on the bus, he comes in daily contact with hundreds of people. But these brief incidental associations are based neither on a sharing of common values nor on a co-operation for a common purpose. They are formal in the most complete sense of the term in that they are empty of content. The sociological aspect of these relationships is, therefore, best defined as one of spatial proximity and social distance. They are merely the transitory meetings of strangers, in which the individual uniqueness of the participants remains hidden behind a shield of formal objectivity, aloofness, and indifference.

COMPLEXITY

The size of the social circles and the plurality and manifoldness of contacts are responsible for the characteristic sociological structure of the city. The city man's effective social world is not an inclusive community, but a social world consisting of a great number of intersecting social circles, mostly of an associational nature. Many of these circles are far apart. The city environment is not only an environment where a man can lead a double life in the popular sense of the word, but it is the environment in which most men lead a plural social life in the technical sense of the word. The city is a pluralistic social universe with a plurality of social standards and relative values.

The plurality of social forms in which the city man participates tends to heighten a consciousness of these social forms and, in contrast with this social environment, a consciousness of self. The self is the only abiding substratum in the changing participations. The individual becomes aware both of his social environment and of

himself as the meeting-point of convergent social circles in that environment. In other words, he becomes self-assertive, in contrast with the village inhabitant who lacks that sharp consciousness of difference between individuality and group, and between private life and social life.

From this analysis of the sociological aspect of city life we can state certain findings.

The social behavior pattern of city life is characterized from the formal social point of view, that is, from the point of view of structure, by a numerical preponderance of large over small circles; secondary over primary groupings; associations over communities; transitory over permanent contacts. The social behavior pattern of the city life is characterized from the formal individual point of view, that is, from the point of view of behavior process, by a numerical preponderance of unrestrained over restrained; individualistic over conformative; rational over emotional; formal, objective over personal, intimate; self-assertive over self-effacing behavior.

This behavior pattern of the city inhabitant, because socially induced and determined, becomes the mold which shapes all human actions, values, and ideas, and is, therefore, the outstanding formative influence in culture.

But the qualities previously enumerated are characteristic not merely of the sociological structure of the city, but of all aspects of city life. For the purpose of illustration this paper will deal only with the broad fields of morals, politics, economics, art, and philosophy. But no aspect of life is exempt from the formative influence of the mold.

MORALS

That the moral behavior of the city man manifests the characteristics enumerated is a matter of common knowledge. The city

is the seat of crime, and the metropolite is an individualist, a relativist, and a formalist in all aspects of moral life. He substitutes "good manners" for personal sympathy and "correct behavior" for "old-fashioned morality." He refuses to accept the moral code as fixed for all eternity, and reserves the right to design his own norms of conduct. He has been accused of egoism, and his hypocrisy has been compared unfavorably with the sterling qualities of the honest farmer.

But it is hard to see how it could be otherwise. Moral behavior is, after all, merely social behavior viewed with reference to norms and standards. The statements that social restraints are weak and that crimes are numerous are merely two different descriptions of the same phenomenon. That the city man is an egoist is the immediate result of his social life, which demands self-assertiveness. Hypocrisy means that the individual so accused does act differently under different circumstances. But the city inhabitant is a dweller in a pluralistic social universe. He participates in a great many different social circles, and is thus subject to a great many different sets of social standards.

It is therefore obvious that the moral life of the city is not only indirectly, but also directly and immediately, determined by the sociological structure. It is merely that structure itself, seen as behavior and viewed with reference to moral standards.

POLITICS

In the field of politics we observe the same phenomena. To the city, the bulwark of liberty in all civilizations, we owe both freedom and democracy. It was in the city-states of the ancient world that democracy was born, and it was in the towns of the Middle Ages that men fought as freemen against the absolutism of monarchs when their rural brothers were still enslaved in the meshes of the feudal régime. In the history of freedom the city has played the

leading rôle. It invented the rights of man, and it has fought for these rights with oratory, with pamphlets, and with stronger weapons. Most political revolutions have had their origin in the city, and many of them have been decided on the barricades of the capitol. That was the case in the revolutions of '48 and again in the revolutions of the post-war period.

The desire for democracy is the desire to reproduce in the political organization of the nation the formal sociological relations of the city. Democracy means formal equality of all voters, and, therefore, the neglect of individual differences. It means freedom to combine in political parties on the basis of common interests, and it means the substitution of restraint by laws of one's own making for restraint by autocratic decree.

This modern legislation is itself rational in design and aggressive in nature. The modern law is not merely a translation into legal form of what is already accepted as custom. Its aim is not, as in former times, conservation, but its object is increasingly becoming reform and reconstruction. This belief in the possibilities of reconstruction by legislation is itself an expression of the unqualified faith in reason.

The sociological structure of the city has been the predominating influence in political theory from the eighteenth-century notions of individual natural rights up to the present pluralistic theory of the state, with its overemphasis on associations and its neglect of the community.

ECONOMICS

The familiar behavior pattern is observable not merely in the spheres of morals and politics, but also in the sphere of economic life. Freedom is the keynote to the modern economic structure, and it is in the city that we find the modern economy developed to its full glory. Freedom of contract and freedom of competition are its basic principles.

This economic freedom has also produced an economic individualism. The division of labor and the differentiation of occupations are the immediate product of the absence of enforced conformity.

In the modern money economy, economic behavior is guided by considerations of price, and therefore by mathematical reasoning. A predominant money economy means an evaluation of goods not in and for themselves, in terms of subjective enjoyment, but in terms of money, that is, in terms of other goods.

While individualism is the characteristic feature in the field of production, formalism is the characteristic feature in the field of consumption. Standardized consumption means the ignoring of individual tastes in consumers on the part of producers.

That self-assertion is a predominant note in modern economic life need hardly be mentioned. Ruthless competition is one of its outstanding characteristics, and the modern business man is as aggressive in his sales policies toward a defenseless public as he is in his struggles with his competitors.

ART

The characteristic behavior pattern has pressed its mold not merely on immediately social aspects of life, but also on art and philosophy, which are social only in a very indirect sense.

Modern art since the Renaissance presents a number of aspects which seem the immediate reflex of the typical sociological structure of the city. It shows differentiation in the independence and self-sufficiency of the different art forms. Sculpture and painting have now become completely divorced from architecture and music, and dancing from poetry. There is a strong manifestation of individualism in the absence of a common style and the plurality of schools and movements. A growing intellectualism and a tendency toward abstract treatment is evident in music as well as in sculpture and painting.

The revolt against restraints is manifest in all arts, both in form and content. In the latter it is especially noticeable in modern literature. The old forms are no longer acceptable, and generally acceptable new ones have not yet been found. The unities of the drama, the rules of composition in music and literature and painting have all been relegated to the attic. Music without theme, novels without plots, verse without rhyme, and language without grammar—such is modern art.

Such formal restraints have been rejected because they hamper self-expression, and self-expression is the aim of every artist. All that the modern artist can express is himself, not merely in his treatment, but also in his subject matter. He can no longer give artistic expression to common values because there are no common values to express. Hence the impressionism and post-impressionism in music, sculpture, and painting, and the psychoanalytic movement in literature. Hence also the formalism, with its cry of art for art's sake, and the pure aestheticism, which sees the highest art in beautiful but meaningless forms.

PHILOSOPHY

The philosophy of our modern civilization shows once more, like that of other periods and other cultures, that even the most abstract speculations are merely the rationalizations of life's experience. It is characterized by a relativation of form on the one hand and an emphasis on process on the other. The latter is illustrated by the philosophy of Nietzsche and Bergson, in their emphasis on life and on the vital principle. The former is evident in historicism, psychologism, pragmatism, or whatever else modern relativism may be called.

The philosophers of vitalism have emphasized the unity and permanence of life's process over the plurality of life's forms; the philosophers of relativism have emphasized the plurality of life's

forms over the unity of life's process—both have started from the modern social structure. The first have built on the heightened consciousness of the unity and the permanence of the self in a world of manifold social circles. The latter have started from a heightened consciousness of the plurality and manifoldness of the social environment. Both have admitted the relativity of form.

Thus moral values and aesthetic values have lost their absolutism, and even truth itself has become relative. It is no longer absolute and universal, self-evident and eternal, but it has become a relativity, a means to an end, an "as if," a mere tool in a process of adaptation. This pluralistic universe of modern philosophy is but the metaphysical projection of the pluralistic social world of the modern city.

SUMMARY

These illustrations must suffice to indicate the trend of a sociological interpretation of life. Wherever we have searched in the various aspects of modern life there we have found the familiar characteristics. Whether we observed the field of politics or of art, of economics or of metaphysics, individualism and self-assertion, rationalism and relativism were always in evidence. The social behavior pattern is truly a mold which shapes all life.

The sketch of our social philosophy is, therefore, completed. Viewed as a precursor to a scientific study of social phenomena, it can give only a few tentative suggestions for studies of social causation. Viewed as a social metaphysics it is independent and self-sufficient, to be judged only in terms of its adequacy to give a unitary interpretation of the manifoldness of city life.

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II

SOCIAL BIOLOGY OF CITY LIFE

SOCIOLOGY AND BIOLOGY

With regard to the relation of sociology and biological science in the common task of understanding human phenomena two extreme positions have been more or less naïvely occupied. Some writers have held that social reality is merely a recurrent expression of the biological characteristics of the human animal and so without independent continuity. Others have conceived of cultural phenomena as independent of the hereditary physical facts and uninfluenced by differences or changes in the biological stock. The effort of various writers to resolve the conflict into an intermediate position has frequently resulted in their alternate occupation of mutually exclusive points of view. Nowhere, apparently, have the independence and the interdependence of the biological and sociological processes been adequately defined and clarified.

In certain respects at least the distinction between the processes is clear-cut and, in spite of the historic confusion, unmistakable. The mechanism of the process which is the object of biological study is germinal transmission which insures species continuity, and selection by environmetal factors of variant types resulting in a modification of the germinal constitution and, in subsequent generations, in modified organic forms. The general rejection of the hypothesis of use-inheritance puts the individual life-experience outside the orbit of biological interest except in so far as it operates selectively to change the germinal stream. The process is always selective, never cumulative. The mechanism of the process which is the object of sociological study is interaction, through contact and communication, which insures the cultural continuity of the group, and the accumulation, through invention and diffusion,

of culture facts resulting in a modification of the forms of interaction and, ultimately, in the social nature of the communicating forms. The process is always cumulative. The two processes are relatively, not absolutely, independent and are not measureable one in terms of the other.

Changes in the biological nature of the organism may give rise to phenomena that are in no sense biological. The amalgamation of divergent ethnic groups is a biological phenomenon, and the inherited characteristics of the offspring of such unions a subject for biological investigation. But the condition under which two such divergent groups will amalgamate is a question in which the biologist is not interested and to the investigation of which his technique is not adapted. The characteristic appearance of the hybrid offspring, a biological fact, may be the occasion of differential treatment determining social status, personal success, and psychological characteristics, the investigation of which is exclusively sociological. A similar thing is true in regard to the new or modified racial attitudes that may result directly from the amalgamation or indirectly from the socially determined characteristics of the hybrids.

On the other hand the social process may give rise to phenomena that fall outside the sociological orbit and within the biological. To continue the illustration above, the social status of the hybrid individuals may determine marital choices resulting in change in the racial stock.

The individual papers in this section emphasize different aspects of the social and selective influences of an urban environment and exemplify the relative merits of contrasted methods of research. Mr. Sutherland's paper defining the biological and sociological processes states the problem and serves as an introduction to those that follow. The paper by Mr. Johnson admirably exemplifies the type of generalization possible when social reality is approached

from the standpoint of another body of scientific reality. Of the three research papers, that of Mr. Herskovits presents statistically the effects of social selection in determining a racial type; that of Mr. Zorbaugh defines a social type determined by environmental conditions; while that of Mr. Wirth shows the formation of social types through the interacting rôle of temperament and the social situation.

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THE BIOLOGICAL AND SOCIOLOGICAL PROCESSES

I

Some biologists contend that since biology is the general science of life and sociology is the science of a particular kind of life, sociology is merely a part of biology. At the other extreme are some sociologists who maintain that sociology and biology are entirely distinct. Most sociologists take middle ground, but they nevertheless appropriate a considerable mass of biological materials for presentation in their books and lectures, and justify this procedure either by the similarity of the biological and sociological processes or by the importance of the biological processes as causes of the sociological processes. What is the relation between biological processes and sociological processes? This paper is an attempt to differentiate them in behavioristic terms.

Gumplowicz has defined a process as the interaction on each other of heterogeneous elements. Interaction, which is the reciprocal action of objects upon each other, is a universal phenomenon and is characteristic of everything we know. It is not merely an action of one object and an action of another object, but it involves a relation between the actions which justifies the prefix "inter." But Gumplowicz would have been more nearly correct in his definition if he had stated that the elements in interaction must be homogeneous. Two billiard balls can interact. A billiard ball and a human skull can interact. But a billiard ball and a throb of pain cannot interact, and a billiard ball and an idea cannot interact. Interaction can occur only between objects on the same plane. They must be homogeneous but need not be identical.

II

Professor Herrick has divided biological processes, from the point of view of functions performed, into three types: somatic, or the adjustment to the external environment; visceral, or the internal processes, such as respiration, circulation, or nutrition; and genetic, or fertilization, growth, inheritance, and similar processes. These three types of biological processes, when contrasted with inanimate nature, have common characteristics. From the behavioristic point of view two characteristics of biological processes appear: first, regulation, or the dominance of one part of the object over other parts of the object so that the parts are, or become, mutually adjusted to each other and a unified and organized action of the whole object is made possible; second, discrimination, or reaction with reference to external objects in such a way as to perpetuate the characteristic pattern of the organism.

Biological processes thus include the interaction of units (individuals, cells, organisms), their adjustment to each other, and their co-operation with each other. An infection starts in the finger. The white blood corpuscles are stimulated to activity; some of them make an immediate and direct attack on the invading germs; others reproduce themselves so rapidly that within twenty-four hours the number of such cells in the body may be increased by five or six hundred per cent. Other parts of the body furnish the materials for this. Still other parts dominate the process. Thus there is organization and integration. Similar processes may be observed in plants. Such processes are, in fact, characteristic of life of every kind.

In such biological processes physico-chemical reactions are going on. The thing that is added to the physico-chemical processes to produce a biological process does not seem to be a material or immaterial element, but a new quality and direction of organiza-

tion. Many biologists believe that it will never be possible to explain biological processes satisfactorily in terms of physics and chemistry, but that the explanation must be made in terms of the organization of elements. Professor Haldane has tried to demonstrate this in regard to respiration. Thus the existence of a separate series of biological processes and of a separate science of biology is justified.

In the social processes, similarly, units (individuals, persons) are interacting, are adjusting to each other, and are co-operating with each other. It is not the *fact* of interaction, adjustment, or co-operation that makes these processes social, for, as stated previously, interaction, adjustment, and co-operation are the traits of all biological processes. The thing that makes social processes different from biological processes is the direction and quality of organization. A social act must be a joint act in which other individuals participate in some way, and the act of each individual must appear in the act of the other participants. One must have within his organism the same tendencies to act that the other participants have, and must organize his act by reference to the prospective acts of these others. In this way one takes the part of, puts himself in the place of, or plays the rôle of, these others.

Thus the essential characteristic of social interaction is that the act of each person has meaning to the other person. Meaning is an objective thing, inhering in the behavior of the participants and in the objects with reference to which they act. When a thing has meaning it is a symbol. As a present stimulus it arouses to action with reference to absent objects. It involves an imputation of consequences to this present object, and thus the absent object comes to be effective in organizing present behavior. For interactions with such meanings involved in them language seems to be essential. And by means of language culture is developed. Thus mean-

ing, language, and culture seem to be nearly coterminous in their development.

When we speak of insect societies and of the social behavior of insects we usually refer merely to their co-operative and adjustive behavior. It is interaction, but there is no sufficient reason to call it *social* interaction. Similarly, many interactions of human beings are not social interactions. Two persons may bump into each other on an icy sidewalk on a windy day. One person may catch a disease from another. Such interactions may be, and may remain, entirely on a physical or biological plane. The infant "controls" the parent by its cry, but so far as the infant is concerned this is not social interaction until the symbol represents the ability of the child to place itself in the position of the parent.

Just as every biological process is mediated by physical and chemical changes, so every social process is mediated by biological changes. Some elements in behavior are primarily or exclusively biological, while other elements have the additional quality and direction of organization which makes them social. The process of digestion, for instance, is biological, but the selection of a menu, the observance of a code of table manners, and the conversation with table companions are social. This connection between the biological and the social does not make it necessary for the social sciences to have their feet in both worlds.

The discussion thus far has been a comparison of biological processes and social processes. But all of the social sciences claim social processes as their object-matter. The question may be asked, What kinds of social processes or what aspects of social processes are the particular object-matter of sociology? One answer, recently given by Professor Znaniecki,[1] to this question is that the particular direction of the social activity determines whether the activity

[1] F. Znaniecki, *Introduction to Sociology*, pp. 240 ff.

is the object-matter of sociology or of one of the other social sciences. If the activity is directed at a commodity it is an economic activity. If it is directed at a human being or a group of human beings it becomes the object-matter of sociology. Those social activities or social processes which thus involve human beings as values may be called sociological activities or processes.

Efforts have been made by many sociologists to classify social interactions. A useful classification, made from the point of view of the relation between gesture and response, designed to show the patterns of social interactions, is as follows: (*a*) conflict, illustrated by blow-for-blow, with the reaction directed against, and in opposition to, the one who makes the gesture; (*b*) avoidance, illustrated by pursuit-flight, with a reaction which tends to avert the gesture by terminating the contact; (*c*) submission, illustrated by blow-prostration, with a reaction which tends to avert the gesture by the assumption of a posture which grants dominance to the one making the gesture; and (*d*) supplementation, with a reaction for or with the one who makes the gesture.

III

Conventional sociology has followed Herbert Spencer in attempting to explain social processes by relating them to the entire universe outside of those processes. For this purpose the universe is generally divided into four factors. Sociologists have taken great pride in this fourfold, synthetic explanation, in opposition to geographic determinism, economic determinism, biological determinism, or other particularisms. But within the last generation many sociologists have concluded that the proper method of explaining a process is by describing what is going on in that process rather than by trying to relate something in the process to something outside of the process. This conclusion is tending to modify the synthetic method.

The principal reason for this conclusion and for the abandon-

ment of Spencer's synthetic method has been the fact that sociologists have found that some social conditions which they had at first explained in terms of biological factors could be explained much more satisfactorily in terms of social contacts and social interactions. Thus, at one time crime was explained as due to biological equipment. Now it is rather generally agreed by sociologists that we have practically no explanation of crime in terms of biology. Differences in the behavior and culture of races were once explained as due to differences in the biological processes of those races. Now there is doubt regarding the extent of these differences, and there is a general hypothesis that the differences can best be explained in terms of social contacts and social interactions. Differences in the behavior of the sexes, which were believed to be due to a difference in biological processes, have been more satisfactorily explained by differences in their interactions. As the emphasis in one problem after another has thus shifted, there has been a tendency to draw the inference that the general dependence of social processes upon biological processes might not be so certain as was at first assumed. The members of the conventional school, however, retort, "We do not assert that biological factors absolutely determine social processes. In fact, we do not believe that any one factor is finally deterministic. We assert merely that biological factors are conditions that must be taken into account when we explain social processes." Without pursuing the debate it may be admitted that the historical tendency to discard biological factors as an explanation does not prove that biological factors are never of importance. The historical tendency has merely raised the question and pointed the inference.

Another argument for the separation of sociology and biology has been made by the social anthropologists, notably Kroeber.[2]

[2] A. L. Kroeber, "The Superorganic," *American Anthropologist*, XIX (April–June, 1917), 163–213; A. L. Kroeber, "The Possibility of a Social Psychology," *American Journal of Sociology*, XXIII (March, 1918), 633–50.

The facts of nature are said to exist on four planes: inorganic, organic, psychic, and superorganic. The phenomena of any of these planes except the first may be explained either by relating them to phenomena on the same plane or by reducing them to terms of the lower planes. Either method is mechanistic, for a mechanistic method is one which describes the sequential order of occurrences. Either method is valid. But the methods are so different that nothing except confusion results from the attempts to combine them. Also, some things can be explained in terms of the same plane though they cannot be reduced to terms of a lower plane. The biologist may explain the facts of hunger and of eating, but, as a biologist, cannot explain why one group regards eggs and milk with abhorrence and another group regards them as necessities of life.

The most significant reason for the separation of sociology from biology is that this makes possible a limitation of the task of the sociologist so that his task can be performed scientifically. No science can deal with the entire universe. Nor can any science explain all the concatenations of particular events. For instance, a man is killed by a rifle bullet. In order to explain this particular event completely it is necessary to understand the chemistry involved in the explosion of the gunpowder, the physics involved in the force and direction of the bullet, the physiology involved in the penetrability of human flesh and in the dying, the sociology involved in the cultural relations between the persons. Sciences have been developed because certain elements were abstracted from such concrete events and studied as abstractions. The scientist must neglect many elements which are extraneous to the abstracted interactions in which he is interested. An economist may admit that a person can make better bargains when he is not fatigued than when he is fatigued, but he dismisses this as of no significance for a general theory of the distribution of wealth. If general laws

can be developed by a science, they can be used as standards from which to measure variations in particular cases. Thus scientific theory will be of assistance in understanding the concrete event. Professor Znaniecki has recently developed such a sociological methodology in his *Laws of Social Psychology*. He has limited his task by neglecting the extraneous origins of social actions, by separating social actions from particular individuals, by studying the elements of social actions as they appear in various situations.

Sociological theory, therefore, needs to take biological processes into account only in the following provisional ways: First, human organisms are the actors and the carriers of culture. Second, these human organisms have fundamental capacities and urges different from the capacities and urges of other organisms, such as oysters or sunflowers. Third, these capacities and urges differ somewhat from individual to individual; these individual variations may be neglected in the construction of general laws, but must be taken into account when the general laws are applied in concrete situations. Fourth, certain biological conditions are original factors in producing social situations. Thus blindness, deafness, or sickness may be a factor in producing social isolation. The sociologist does not deny the connection in such cases, but he is interested in the relation between social isolation and other sociological phenomena, regardless of whether the isolation is connected with biological factors, geographic factors, or other factors. Fifth, some of the biological traits or processes become objects of cultural attitudes and have significance as culture, rather than as biological factors. The position and behavior of the mulatto can be explained only by the fact that the color of the skin has come to have a social value and to be a cultural trait. When the color of the skin is thus given a cultural significance it comes to be homogeneous with other cultural phenomena and to be a sociological element rather than a

biological factor for purposes of sociological theory. The behavior of groups with reference to age, sex, and some other traits can be explained in part also in this way. Possibly it may be necessary to take biological factors into account in other ways in such a closed system. But up to the present time it has not been clearly demonstrated that other biological relationships are important for theoretical sociology.

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THE EUGENICS OF THE CITY

The first question that arises in a consideration of the eugenics of a city is: Is the human stock of the city the same, innately, as that of the country? We may seek to answer this question in two ways: either by a comparison of the inhabitants as we have them today, or by making an analysis of the selective agencies that operate in differentiating the city dweller and country dweller. The individual psychologist has used this first method, as may be seen in a series of articles in *School and Society* and elsewhere, with a uniform finding of an average superiority of city folk. More research is desirable to make sure that adequate allowance has been made, in the construction of the tests and in the interpretation of the test results, of the effects of environment. Yet the end result, while it may reduce the apparent difference between city and country stock, will probably substantiate the finding in view of the difference. Tests, involving a large vocabulary, now so numerous, are contra-indicated because the city man lives in a world of a larger vocabulary.

A second approach is to get the relative percentage of great men produced in the city and the country relative to the city and country population. The results of such studies confirm the above finding. Here again there are interfering variables but the differences are such that it is difficult to believe that there is not a real difference in stock after a consideration of all the data. As time goes on this difference is likely to be greater, because of the increased rôle of assortative mating.

In analyzing the make-up of the city and country population we may note first the geographical distribution of immigration. In general more immigrants go to the city. One of the main reasons is

that the city is growing faster than the country, and its greater opportunities for growth attract the newcomer to a larger extent. The city population will then be determined disproportionately by the nature of the late migration. The city may also attract disproportionately some part of the immigrant stream. This is notably true of the Jewish race—one which has evolved very largely in the city environment for many centuries past. As such it is a useful type to the city, since it can stand city life with less swamping of its superiors by an inadequate birth-rate, a result which we shall find is the usual effect of the city on most of the races. This is a trait of the utmost importance.

One other race seeks the American city especially because the traditional occupation at home was agriculture in a warm climate with crops different from those that grow here. I refer to the Southern Italian who comes from the culture of the olive, lemon, mulberry, and the wine grape.

On the other hand, the Scandinavian has sought our northern farm lands, where he can apply his farming technique almost unaltered.

The Japanese, with the habits of industry inculcated by a dense population, tolerate the long and monotonous hours of the fruit and truck farm, where they can work in their own natural way. They have thus contributed disproportionately to the country.

But quite aside from the newcomer from without the national boundary, city and country are undergoing a constant interchange of city-turned countrymen and country-turned city men, with the first in a large majority. This interchange is not haphazard, in the long run, but a somewhat selective one. The outstanding types of this sort are the gypsy, cowboy, prospector, and sailor. Of these only the gypsy is a reproducing unit. The gypsy group, as we see it now, has been a result of long selection, the less nomadic becom-

ing discontented and settling down, and new nomads joining the group.

The contrast between the introvert who prefers the undisturbing life of the country and the extrovert who is oppressed by what seems to him to be its colorlessness is probably the largest differentiating factor. Another factor is the relatively stabilized life of agriculture, where there is a well-known standard procedure readily learned by imitation. This is comforting to some limited minds who are uncomfortable when confronted with the new on all sides. The life of the agricultural laborer or hireling fits a still more inferior type, where there is little real responsibility, where the chores are definitely known and of a routine nature, and where his life is sheltered and aid is available to him in meeting his problems. In fact, some of the protective features of serfdom and slavery are available here, just as in the case of the domestic servant. These conditions draw to the country on the whole an intellectually inferior type, as shown in the comparative mental-test results referred to earlier. Of course, there is a contrasted current of retired business men, engineers, and the like, who choose to retire to the peace of the country after an overtaxing life; but this contribution has little significance, since they usually retire after the child-bearing period of their wives, and their children have already built up the city habit and do not become actual country folk.

On the other hand, observe the agencies which pull from the country its brighter intellects. They go to the universities and there usually taste the more exciting life of the city and become adjusted to the stimuli of a selected circle. Many of the brighter ones are offered positions as university teachers, or become investigators, or engage in enterprises for marketing or propaganda which give them an office or laboratory in the city. An analysis of the destiny of agricultural students from the country is needed, but will probably show that those who return to the farm and stay

there are, on the whole, less intellectual, since the positions referred to are offered to select students. Other young men go to the city without the intermediary college stage, drawn by the cities' lure. It is probable that these average above those left behind, for a similar reason.

Just as the gypsy represents a strain selected in some degree for nomadism, and the Kentucky highlander for isolated small-scale farming, so do the Jewish people represent a race selected by the city life. Originally the Jews were doubtless primarily a country folk. Their various captivities broke their relationship to the soil by starting a large city-adapted class, for the slave in Babylon was probably used largely in the cities on monumental and other constructive work. After the return to Palestine what was more natural than that, being less adapted on the whole to country life and having too few farms on which to locate, they should become traders and, as such, eventually emigrants. It was trade, crafts, and emigration, then, that selected the forbears of the European and American Jew, so that they are a selection of those more adapted to city life. The Jewish race is then primarily a city-produced race, and may this not be the reason why it is more economically aggressive and more intellectual? Are not these the characteristics of a people adapted to the city life by conditions prior to 1877, when the situation became altered by the rapid increase of birth control?

But the city in general, as we shall see later, is destructive to the fecundity of the family. Why did it not exterminate this race of city folk? It was because the Jews had a family mores developed by selection and adaptation to the city which, unlike the mores of the Christian peoples they competed with, maintained fecundity, and still does, to a greater degree, even in the city environment. There is among the Jews little disdain of sex, and there is relatively less of the individualism that shirks the burden of children. A

tradition that godly conduct involves a marriage not too late for an ample family is made a religious matter for rabbi and layman alike. This saves the race from the city's destructiveness. Will the Jew, in reforming his religion, hold fast to this valuable feature?

Now we pass to a different aspect of our subject: To what extent do the specific selective agencies within the city act on its component classes in comparison with the action in the country on its component classes, and as between the city folk as a whole in competition with the country folk as a whole? This will be treated under three heads.

a) Lethal selection: that is, the effect of a differential death-rate.—The differences between city and country do not seem to me to be as important in reference to this type of selection as the other types of selective factors. What contrast there is lies in the fact that in the country the death-rate is less variable, class to class, than in the city, where the higher social classes have available the highest skill and care, which more than compensates for the greater exposure to a large variety of pathogenic organisms. In the lower economic classes in the city this exposure is increased much more than is compensated for by the city's better facilities. Free clinics and the like reduce this difference, but the more ignorant fail to make use of what is available and, in fact, often actually prefer the dangers of the incompetent "healer." In brief, the city, on the average, increases the average length of life of superiors and decreases that of inferiors—if one can conclude that the superior classes, socially, educationally, and economically, show a significant degree of positive correlation with innate superiority, an assumption which will be made throughout this paper. The evidence for this view has been made elsewhere by the author.[1]

b) Marriage-rate and age of marriage.—The difference here is very much greater than in the death-rates, for the country fam-

[1] *Social Hygiene,* VII (1921), 255–64.

ily usually has many children, regardless of class. In the city, on the contrary, only the proletariat, in general, reproduces itself adequately. In the city the stock with the higher social-economic status does not, in general, reproduce itself, so low is the marriage-rate and birth-rate.

The reasons for the higher marriage-rate and earlier marriage of country folk lies, it seems to me, first, in a shorter educational period; second, in a simpler standard of life; and third, in the very great desirability of a housewife in each farm unit. The working hours for much of the season are very long, the house is near the fields, and there is much minor labor incident to the farm. In addition to the obvious economic advantage, there is the greater need for companionship during the long evenings at home and during the long, relatively dull, winters. And lastly, there is less competition from such rival interests as the theater, movies, sport contests, lectures, and social gatherings, to which the city dweller gives much time. Moreover, in the city the furnished room, the ready prepared meal, and the steam laundry lessen the physical disadvantages of celibate life.

Whereas in the country a high marriage-rate and early marriage are general for all classes, in the city there is a marked difference between classes, and the difference is unfortunately a dysgenic one. The causes for the later and fewer marriages of the higher social and economic classes of the city are, first, the prolonged educational period, and second, the higher standard of living, which causes the young man at work to postpone his marriage till a higher salary is attained. This is partly due to the inevitable higher costs of the city, but equally a higher, but not necessarily better, idea of what is socially reputable and desired. A third consideration, operative more with the women, is a higher fastidiousness as to an acceptable mate. Are any of these factors likely at all to be altered? I believe a propaganda for a simpler life is likely

to be an aspect of religion in its present trend toward the increase of the humanistic at the expense of the older, more theistic elements in all cults. I have in mind as an evidence Carver's *Religion Worth Having,* that makes much of the ideal of earlier and better marriage with simpler standards on the part of the socially superior classes. There is also hope in a marriage law that would make the minimum age for a marriage certificate vary with the education of the applicant; I suggest it should be twenty-one for both sexes, except for high-school graduates.

On the other hand, there are some factors operating to postpone the age of marriage of superiors still further. These are the increasing number of women entering professions or crafts having a higher intrinsic interest than the low-grade jobs which women a generation ago were eager to leave at the first feasible opportunity. Then there is an ever increasing number of superiors who are going to college, which greatly increased at the end of the war. The response of the professional school to the need of limiting its numbers has been the demand for more and more prerequisite years of training. A much better plan, eugenically, the universities might have discovered, by selecting their students for quality by means of their school marks, mental tests, and special aptitude tests. In this connection the tendency to give the Rhodes Scholarship to college graduates instead of to underclassmen, as in the original plan, is to be deplored.

The divorce-rates in city and country are significantly different. Theoretically, divorce leads, in spite of a few conspicuous examples to the contrary, to a substitution of a superior for an inferior mate. A collection of data on this point is greatly needed, for if the facts were known it is probable that many states and some churches would be led to a more eugenic attitude toward divorce. The more frequent divorces of the city arise mainly from the fact that there is commonly less economic interdependence of man and

wife in the city than in the country. Secondarily, the social ramifications are less in the city, so that one is not known to all the neighbors and divorce is counted less of a disgrace and more a matter of one's own affair. Thirdly, the wider contrasts of the city lead one to a more critical attitude toward the mate. Fourthly, there are fewer, if any, children to keep the family together.

In passing to the third main factor, that of differential fecundity, we come to the greatest and most significant difference between the eugenics of the city and the country. The country family is notoriously larger than the city family, and the difference is greatest with the superior classes. The data that is most illuminating on this point is that of the alumni of the agricultural colleges in comparison with that of the colleges patronized by city folk. Whereas the city-folk colleges have alumni who are, in all cases known to me, inadequate to reproduce themselves, in agricultural colleges we have the highest rates, notably Kansas Agricultural College, at Manhattan, Kansas. In an investigation of mine, as yet unpublished, of families of Mormon college students in Utah, I found that such Mormon families in Salt Lake City were of smaller size than the Mormon family in the country. Both city and country families in that study were the largest I have yet found in educated classes in any western religious cult. This applies to children of one mother. There are no new polygamous marriages performed there by the Mormon church.

Some of this difference between city and country follows from the fact that in general the country folk are of a lower social-economic level; but this is only a minor factor. The principal factors are closely related to those we dealt with in comparing marriage in city and country. In the country marriage is earlier. Children cost less to bear and rear in the country, and, conversely, can contribute economically in an important degree from the time they can weed, pick fruit, and bring the cows home. Children are less of a discom-

modity to care for in the country. They play outdoors in approved ways more and there is less concern about their clothes. The more lonely life of the farm makes them a greater desideratum from the standpoint of companionship and parental feeling. The birth-control methods of the country districts are mainly old primitive ones that are not efficacious, since the restrictions placed by the law more effectually keep from the country folk the information and the materials employed for this purpose.

To what extent is there any hope for at least an equalization of the country and city in these respects?

1. The disparity in reference to age of marriage we can expect will lessen; first beause the prolongation of schooling in the country is likely to be greater in amount per pupil than in the city, since the school facilities of the country are growing faster in proportion than those of the city; second, the availability of the school is greatly increased by the better roads and more automobiles and because of a changed attitude toward agriculture which is increasingly causing the farmer to regard school preparation as valuable.

2. A lessened isolation of the country because of an easier and more frequent transportation increases the travel to and from the city. Encouraged by the better transportation, more and more of the city folk are taking places in the country, at least for part of the year. Better communication, including the rural delivery and the radio, is bringing the city and country mores closer in respect to some of the differentiating factors, such as the cost of rearing children and the lonely life of the farm.

3. On the side of the city, the growing tendency for the city worker to live out of town far enough to get some of the country cultural aspects mentioned and to commute or motor in prevents, in part, the city environment from reducing the size of his family as much as it would if he had lived in town. Yet such individuals cannot be expected to have as large families as the real country

population has, for many of the city factors that make for a limited family are still operating on such families.

4. It is, however, with respect to birth control that the future offers the greatest possibility of change. While the distribution of information and materials is still illegal, people as a whole have a strong disapproval of the law, at least in so far as it applies to themselves, so that the information as to the newer, more efficacious, and less discommodious methods of birth control are spreading rapidly among the well-informed of the city and also more slowly through the country. Public opinion has now reached the point where modification of these laws is imminent. If they are not modified, they will fall into disuse, as prosecution and conviction, because of the attitude of juries, will soon be impossible. In fact, there has been no prosecution for some time, although the laws are constantly being broken. The first modification will probably be—because compromise measures usually come first—to lessen the restriction on the freedom of the medical profession. Such a bill would not adequately alter the present city-country disparity in birth control because, for obvious reasons, the country doctor is less frequently consulted; and, moreover, is himself likely not to be abreast of the current developments, which are rapid in this field. A bill making the information or the means of birth control free is essential to eliminate the difference in the birth-control factor between city and country, and it must be supplemented by a determined effort of eugenic or other societies to see that the country, especially in the southern states, is abreast of the city in these practices. It is quite possible that this effort will be somewhat thwarted, because the religion of the country is notoriously conservative. The readjusted attitude of religion to birth control which has progressed far in the city keeps ahead of the country church, which will resist the inevitable for a longer period.

In contrast with the favorable reproductive aspects of the re-

ligious traditions for the city of the Chinese, Jew, and Mormon, orthodox Christianity, as we have had it, poorly adapts to the city life; for while there is great emphasis on chastity, it leans backward by approving celibacy. In fact, in the doctrines of the virgin birth and the exclusion of marriage or the marriage state from heaven it casts disrespect upon reproduction. It has no apparent disapproval for childlessness or the too-small family. While there is a disapproval of birth control in some Christian cults, it is a dysgenic kind of disapproval, for it is too sweeping, and the reason given is merely unnaturalness—a reason so sophistical as to influence most the unintellectual and not convince the logical thinker, who should be dissuaded from his abuse of birth control.

Not one religious cult today teaches an especial duty of superiors to reproduce adequately, a duty greater than that of inferiors. On the contrary, we have the destructive teachings of Matthew 19 and I Corinthians 7. A religion for the city should meet the city's greatest evil, the subfecundity of its superiors, and should approve the more restricted birth-rate of inferiors that can be achieved only by a more general use of birth control.

We have discussed in passing some aspects of the reception the eugenics program receives in the city and county. There are other aspects that merit our attention now. The eugenic program is now more readily spread in the city, where all contacts are easy and where a more receptive ear is open to the new. But on the other hand there is a friendly ear for eugenics when it does reach the rural reader or hearer, because his experiences with his plants and animals have taught him the very great rôle of heredity. Hereditary human differences impress him more than they do city folk because, the environment in the country being more similar, he more readily recognizes the important rôle of heredity. In evidence of this is the fact that more and earlier papers on eugenics ap-

peared in the publications of the American Breeders' Association and its successor than in any other journal in the United States.

In conclusion, we find that the old belief that the city is more dysgenic in that it attracts many superiors from the country and then reduces their fecundity is well founded, and the great problem for eugenists today is to develop mores by which we can stand city life and not have the birth-rate of superiors dragged down by it. A wider use of birth-control methods will reduce the rate at which the superiors are outbred by the inferiors, but the still more important question is, By what means can more children be produced from these superiors? No means is in sight except essentially a religious one, the inculcation of eugenic conduct as moral conduct. If the religious cults will turn from their all-too-common contemptuous attitude toward sex and indifference to reproduction to a devotion to the eugenic ideal it is probable that an ethics of reproduction can be made effective. If not, then the slow process of natural selection will develop a species that will have a strong parental instinct, whatever else they may lack, for of one thing we may be sure: future man will have the characteristics of those who are superfecund, whether we like it or not.

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SOME EFFECTS OF SOCIAL SELECTION ON THE AMERICAN NEGRO

The American Negro, in racial composition, is as mixed a population as can be found, perhaps, anywhere in the world. Not only is he derived from numerous types of African peoples and white populations of Europe, as much different as the English and Scotch who settled the eastern seaboard of our southern states and the French and Spanish of the extreme South, but he also counts in his ancestry the American Indian to no small extent. That this mixture has occurred is not doubted, but that it has been as widespread as is found has not been realized. The differences in physical form among West African peoples are enormous, while the differences among the Europeans and Indians who mixed with the Negroes are none the less so. Therefore, before proceeding to discuss the effects of social selection it may be well to point out briefly what has happened to the Negro in the centuries he has been here, and how the African type has been modified in its crossing with these two other types.

In a study of variability under racial crossing, with particular reference to the American Negro, I have had occasion to measure 538 adult males at Howard University in Washington and in New York City, and also about 1,500 school children in one of the New York public schools.[1] From these adults I have gathered genealo-

[1] The writer wishes to express his gratitude to the President and Faculty of Howard University for their numerous courtesies to him in furthering his research, and to Dr. Jacob M. Ross, principal of Public School 89, and his staff, for their courtesies. This research has been carried on as Fellow of the Board in the Biological Sciences, National Research Council, and the work in Washington was made possible by a special grant of the Committee on Human Migrations, National Research Council.

gies which indicate the amount of crossing represented today in the Negro population. The classifications and the numbers and percentages of each group, according to their own statements, are as follows:

	No.	%
All Negro	109	20.3
Negro with Indian	36	6.7
More Negro than white	129	23.8
More Negro than white, with Indian	51	9.6
About the same amount of Negro and white	95	17.7
About the same amount of Negro and white, with Indian	57	10.6
More white than Negro	30	5.6
More white than Negro, with Indian	31	5.7

The validity of these genealogies may be denied, but the differences in means for distinctive negroid anthropometric traits between the groups of differing amounts of Negro ancestry show that they may be safely utilized.[2] It may also be questioned whether this sample is large enough to represent the population as a whole, and whether it may not be highly selected, since the great majority of the men are college students. If the means and variabilities for this series be compared with those of the large series measured in the army by Davenport and Love[3] for stature, sitting height, and hip width, it will be found that they are very close, while this is also the case if comparison be made for numerous traits measured by me on this series and by Professor Todd on a sample of one hundred male Ne-

[2] This material has been thoroughly analyzed in an extended paper, "A Study of the American Negro," not yet published.

[3] *The Medical Department of the United States Army in the World-War*, Vol. XV, "Statistics," Part I, "Army Anthropology."

gro cadavera representing paupers who died in the hospitals of Cleveland, Ohio.[4] Therefore the usability of this sample cannot be gainsaid. It is interesting to note, however, that in a paper studying age-changes in skin color[5] I found that the color of the Negro school children and of the Cleveland pauper sample (allowing for darkening after death) is quite darker than that of the university students. Since color plays an important selective part in Negro life it may be well to state here that the percentage of pure Negro given above is probably too low for the total population, and that perhaps 10 per cent should be added to allow for this color selection in university men.

When one takes the series as a whole for such traits as have been measured it will be seen that the means for the respective traits are somewhere between the means for corresponding traits in European and West African populations, and those for such American Indian populations from the eastern United States as have been measured. In other words, what has happened is that there has been a blending of the types from which the American Negro has come, and that this blended type lies somewhere between the three groups. However, in the light of the Mendelian hypothesis, the objection will at once be brought that this is a false conclusion, perhaps, from the statistical material, and that what we have is a series of false means lying between the modes of bimodal, or even trimodal, distributions, which would be expected if there were segregation of types. This is not the case, for the curves are very near the normal type, usually unimodal, and show little or no indication of segregation.

[4] This material was given me through the courtesy of Professor Todd, and has not as yet been published.

[5] A paper read at the New Haven meeting of the American Anthropological Association, December 28, 1925, "Age-Changes in Skin Color of American Negroes."

One must consider the comparative variabilities of these populations before this question can be really discussed. In a mixed population such as this, if there were segregation the variability of the mixed population would have to be greater than that of any of the parent populations. This has been shown to be the case in head form, where the variabilities of central Italians is shown to be greater than that of the southern or northern inhabitants of that country, due to the mixture of long-headed southern Italians and short-headed northerners.[6] In the case of mixed Negro-white populations this trait cannot be utilized, since the long head is characteristic of both, but in a majority of other traits we see the striking result that the variability for the mixed American Negroes is about the same or less than that of any of the ancestral populations. It is therefore to be argued that segregation of type is not to be observed here. And while it is needless to state that the Mendelian problem in human heredity is not to be solved by measures as rough as these, yet the results obtained from the analysis of this sample give food for thought on its relation to the general mechanisms of heredity in humans.

In any case, what comes out is the homogeneity of the American Negro. The low variability of the population in trait after trait tends to confirm this hypothesis, while a study of the variability of family lines through measurements of fraternities of Negro children shows that the variability of family lines in American Negroes is as low as that of the Tennessee mountaineers, although the variability within the families of the American Negroes is very high in the list of other populations studied, and attests to the tremen-

[6] Franz and Helena Boas, "The Head-Forms of the Italians as Influenced by Heredity and Environment," *American Anthropologist*, New Series, XV (1913), 163–88.

dous differences in ancestral stock represented by these families.[7] Correlation of length and breadth of head,[8] used as an index of homogeneity in a population, again gives us an indication of large homogeneity when presented comparatively, and strengthens the hypothesis that the American Negro, in the years he lived here and mingled with white and Indian stocks with which he was thrown into contact, has developed a human type which is different from any of the parent types, and that, although called Negro, is a homogeneous blend of the Negro, white, and Indian ancestry he represents.

As this surprising homogeneity developed from the material, I strongly felt that if it were valid, inquiry must find a social selective process which brought it about. Social motives are complex by their very nature, but I believe that there are two principal elements which can be singled out of the mores of the Negro and of the general population which will adequately account for the phenomenon. In the first place I do not feel that crossing with whites, general opinion to the contrary notwithstanding, is going on to any appreciable extent. Out of the six hundred genealogies and more which I have collected only about 1 per cent of the individuals have a white parent. If we allow for a possible selection due to many persons being university men and increase the percentage to 5 per cent, this still is almost negligible. As a matter of fact, I find that among Negroes the pressure against illicit sexual relations with whites is as strong, if not stronger, than the opposite is among the

[7] M. J. Herskovits, "A Further Discussion of the Variability of Family Strains in the Negro-White Population of New York City," *Journal American Statistical Association,* New Series, XX, No. 151 (1925), 380–89.

[8] M. J. Herskovits, "Correlation of Length and Breadth of Head in Two Groups of American Negroes," *American Journal of Physical Anthropology,* IX (1926), pp. 87–97.

general white population. This would, of course, make for inbreeding within the Negro group.

The other element is the invidious nature of light skin color.[9] The case of the increased lightness of the University students will be recalled. There is the well-known fact that light persons are found in the college fraternities of the Negroes, for instance, and that in many of the more "socially" desirable religious denominations the greater number of members are light. The fact comes out most strongly in the relationship of the sexes in marriage choices. It was suggested to me that light women marry dark men; the men, in accordance with our general pattern of this situation, obtaining wives who bring them prestige; the women obtaining husbands who work hard to retain the regard of their lighter-colored, and therefore more desirable, wives. This tendency comes out strongly in the results obtained from asking 380 men "Who, of your parents, is the lighter?" Out of three possible answers, 50, or 13 per cent, gave their parents as the same color; 115, or 29 per cent, said their fathers were lighter; while 215, or 58 per cent, said their mothers were lighter. This desirability of non-negroid traits to the Negro also comes out in the expressions of "good" and "poor" hair —the latter being the negroid tightly curled type—and of "good" and "broad" features—the latter being the negroid face with the thick lips and wide nostrils. In other words, there is a combining of the extremes of racial types within what is becoming an endogamous group, and nothing can make more efficiently for homogeneity.

I believe, therefore, that we have here a striking case of the effects of social selection, and that we may conclude from the results of this study obtained thus far that:

[9] I have discussed this matter at some length in a paper entitled "The Color Line," published in the *American Mercury*, VI (October, 1925), 204–8.

1. There is a tendency to endogamy in the Negro population, and the selection is based on the invidious nature of non-negroid traits.

2. That this tendency is operative in a group which has resulted from extensive crossing between African, European, and American-Indian stocks.

3. That the type which has resulted is one which, in most traits, is, on the average, somewhere between the African, European, and Indian types.

4. That the variability of the resulting crossing is not large, as it would be expected to be, but

5. That the American Negro is forming a type which is relatively homogeneous when compared with other populations.

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THE DWELLER IN FURNISHED ROOMS: AN URBAN TYPE

THE SOCIAL TYPE

The social type is the psychological parallel of the biological type. In the animal world the struggle for existence, variation selection, and adaptation—especially when favored by isolation—give rise to new biological types. By a biological type we mean merely a combination of structural and functional characteristics transmitted by heredity.

Similarly, in the process of social interaction, competition and accommodation—particularly when favored by the selective segregation so characteristic of the city—give rise to social types. By a social type we mean a constellation of attitudes forming a personality pattern, not inherited, but growing out of a social situation.[1]

Involved in any analysis of human behavior are three sets of factors: the social situation to which the person must adjust, the wishes of the person, and the attitudes of the person—constellated about certain objects and situations, and integrated into personality patterns. We assume that the fundamental wishes of the person remain constant, and that the person's attitudes vary with the social situation. The analysis of a social type requires, then, a description not only of the attitudes characteristic of the type, but of the social situation in which the attitudes have been defined.

THE ROOMING-HOUSE AS A SOCIAL SITUATION

The natural areas of the city are areas both of selection and of characterization. Each natural area tends to be stamped with a

[1] For the distinction betwen the biological individual and the social person, see Park and Burgess, *An Introduction to the Science of Sociology,* 2d ed., chapter i.

given cultural complex. In the competition for position in the city these areas sift and sort the population, tending to draw from its mobile stream those persons having attitudes more or less like those of the persons already living in the area. But beyond this, the natural area tends also to set its mark upon the person living in it, to characterize him with certain attitudes and behavior patterns required in adjusting to the social situation represented by the area.

The rooming-house area, like other areas of the city, tends both to select and characterize its population. In selecting its population, it acts chiefly upon age and economic status—perhaps upon temperamental traits. As a result the rooming-house population represents a diversity of cultural backgrounds. And if the dwellers in furnished rooms constitute a social type, they do so largely because the rooming-house area is an area of characterization.

The rooming-house area affords a social situation of a unique sort. As an example let us take the rooming-house area on the Lower North Side of Chicago.[2] An analysis of the register of Illinois lodging-houses reveals the fact that there are 1,139 rooming- and lodging-houses on the Lower North Side, and that in these houses 23,007 people are living in furnished rooms of one kind and another. Ninety blocks in the better rooming area north of Chicago Avenue were studied intensively by means of a house-to-house census. This study revealed the additional facts that 71 per cent of all the houses in this district take roomers, and that of the peo-

[2] The data presented here were collected by the writer when a research fellow under the Community Research Fund administered by the Social Research Committee of the University of Chicago. They represent a year's intimate contacts with dwellers in furnished rooms as a resident among them, a census of nearly ninety blocks in the area, the information afforded by the Illinois state lodging-house register, and the life-history documents of dwellers in furnished rooms in this area. The documents from which this data is taken are on file with the Department of Sociology of the University of Chicago.

ple who live in these rooms, 52 per cent are single men, 10 per cent are single women, and 38 per cent are couples, "married," supposedly with the benefit of clergy, though actually 60 per cent of these couples are living together unmarried. The rooming-house area is a childless area. Yet most of its population are in the productive ages of life, between twenty and thirty-five. The rooming-house population is typically what the labor leaders refer to as the "white collar" group—men and women filling various clerical positions, accountants, stenographers, and the like. There are also students from the many music schools of the Lower North Side. Most of them are living on a narrow margin, and here they can live cheaply, near enough to the "Loop" to walk to and from their work if they wish.

The constant comings and goings of its inhabitants is the most striking and significant characteristic of this world of furnished rooms. This whole population turns over every four months. There are always cards in the windows, advertising the fact that rooms are vacant, but these cards rarely have to stay up over a day, as people are constantly walking the streets looking for rooms. The keepers of the rooming-houses change almost as rapidly as the roomers themselves. At least half of the keepers of these houses have been at their present addresses six months or less. This extreme mobility results in a startling anonymity, a thwarting of the wishes, and a breakdown of public opinion. How complete this anonymity may become is illustrated in the following document:

I had occasion to inquire for a man living in a rooming-house. He had roomed there about a week. There was no telephone in the place, so I had to call at his address. I went there about 7:30. After I had rung the bell for some time a woman about forty-five answered the door. She wore a house apron and was evidently the landlady. I asked for Mr. X. She said, "Who?" I repeated the name. She shook her head and said that she didn't know anyone of that name. I looked in my notebook, to see if I had the correct address. I told her that this was the address he had given, and went on to describe him. She knew

of two men in the house who might answer to his description. I then told her that he did a lot of work on the typewriter in his room. Then she knew whom I meant. He was not in. I came back a week later, and the same woman came to the door. I asked if Mr. X was in. She said he had moved yesterday. I asked her if he might not have left a forwarding address for his mail. She said that he did not, that he never got any mail.

In this mobile and anonymous situation the tendency is for no one to know anyone else, as is brought out by this document:

One gets to know few people in a rooming-house. All told, in the year and a half I lived there, I didn't come to know over twenty well enough to speak to them. And there must have been nearly three hundred people in and out in that time, for there are constant comings and goings; someone is always moving out; there is always an ad in the paper and a sign in the window. But rooms are never vacant more than a few hours. People change so fast that there is little chance to get acquainted if one wished. But one doesn't wish—there is a universal barrier of distrust in the rooming-house.

The rooming-house is not to be confused with the old boarding-house, where the common dining-room, the landlady's parlor with evenings of euchre and whist, and the piazza with summer evenings of gossip afforded a nucleus of opinion and a set of social relationships which afforded satisfaction to the wishes and tended to define social situations. The boarding-house has passed out of existence in the modern city—not half a dozen were found in this Lower North Side district. The rooming-house which has replaced it has no dining-room or parlor, no common meeting-place. The roomers do not know one another. People come and go without speaking or questioning. Anonymity is well-nigh complete.

In this situation of mobility and anonymity the person is socially isolated. His wishes are thwarted. He finds in the rooming-house neither security, response, nor recognition. He is restless and he is lonely.

A "charity girl," in an illuminating life-history document, exclaims:

> There was no one to care! Why should I slave and work when I might have the things I wanted? And not the least of these was the intimate touch and glance of a man—even if it were only half make-believe—someone to talk intimately with; someone to come home to; someone to ask where you've been; these, too, are things one can't live without.

A man who lived in a North Side rooming-house wrote:

> I found myself totally alone. There were evenings when I went out of my way to buy a paper, or an article at a drug store, just for the sake of talking a few minutes with someone. Worse, if possible, than the loneliness [he goes on] was the sex-hunger. I thought of marriage, but the only girls I had met were office stenographers I never would have considered marrying. The constant stimulation of the city began to tell, adding tremendously to this sexual restlessness—lights, well-dressed women, billboards advertising shows.
>
> It got so that posters showing women in negligee, or women's silk-clad legs, excited me unbearably. Many times I followed an attractive woman for blocks, with no thought of accosting her, but to watch the movements of her body. A girl in the next house used to undress without pulling down her shade, and I literally spent hours watching her.

In addition to resulting in a thwarting of the person's wishes, this mobility and anonymity result, of course, in a total collapse of public opinion and social control in the rooming-house area.

PERSONALITY PATTERNS IN THE WORLD OF FURNISHED ROOMS

The emotional tensions of thwarted wishes force the person to act somehow in this situation. His behavior may take one of three directions: He may find himself unable to cope with the situation, and attempt to withdraw from it. This withdrawal frequently takes the form of suicide. There was a bridge over the lagoon in Lincoln Park, in the heart of the North Side rooming-house district, which was nicknamed "Suicide Bridge" because of the number of people who threw themselves from it into the lagoon. Be-

cause of its sinister reputation the city tore it down. A map of the distribution of suicides on the Lower North Side shows how frequently this seems the only way out to the persons of the rooming-house world.

Or, again, the person may build up an ideal, or dream world, in which are satisfied the wishes that find no realization in the repression of the real world:

There were two girls in a room across the hall who worked as shopgirls in the Loop. They came from some town in southern Illinois. They weren't good-looking—and besides, like myself, they had had good homes—so they were lonesome. They used to go often to the movies, and sometimes to a dance, but the celluloid heroes proved more satisfying to those plain but heart-hungry children than did the neglect of the dance-hall "sheiks." Other evenings they spent reading *True Romance, Experience, The True Story Magazine,* and other such magazines devoted to stories of the adventures of girls in the city. One of them kept an intermittent diary, filled with stories—fictitious, I always was sure—of street flirtations and adventure. We used to spend evenings writing letters to Doris Blake[3] asking what a young girl should do if a man she liked but didn't love tried to kiss her. It was all a make-believe.

Or perhaps a substitution is made, and the person finds satisfaction for his thwarted wishes in symbols which represent old associations—or lavishes his affection on a dog or a parrot:

She lavished attention on the parrot. She bought it the best cage she could find, cared for it according to the best parrot-lore, and returned home after work to give it food and exercise. It ate its supper with her, perched outside on a basket handle, being fed now and then from her spoon. In the morning it flew to the side of the cage to greet her, and talked to her while she dressed. It was her child. She sacrificed herself for it. "You can't imagine," she would say, "what it means to have Polly in my room—it makes all the difference. . . . ."

There are thirty-seven things on the wall—mostly pictures, among them a photograph of her father's old stone house, the picture showing the country in which she had lived, a cheap print of a child in its nightgown descending the stairs, a colored print of a man and woman sitting in the firelight, some family

[3] Doris Blake is editor of the "Advice to the Lovelorn" column in the *Chicago Tribune.*

pictures. There is a newspaper cartoon of a homeless man on Thanksgiving Day, shabby and alone at a cheap restaurant, seeing a vision of a pleasant family group about a generously laden table. There are thirty-nine articles on the bureau, two small stands, and a melodian—including a tiny doll and a tiny cradle. I have urged her to cast away nine-tenths of these things, in the interest of her time budget, to make cleaning simpler. "I have to have these things," she responds. "You have your home and family and friends and leisure and everything—you can't possibly understand." She plays hymns and the old songs of the countryside on the melodian—"Darling, I Am Growing Old!" The parrot tries to sing after her.

This clinging to objects symbolic of old associations often amounts, among dwellers in furnished rooms, to a sort of fetishism.

More frequently, though, the person accommodates himself to the life of the rooming-house world by an individuation of behavior. Old associations and ties are cut. Under the strain of isolation, with no group associations or public opinion to hold one, living in complete anonymity, old standards disintegrate and life is reduced to a more nearly individual basis. The person has to live, and comes to live in ways strange to the conventional world:

I get along fairly well, now. I am no longer lonely. I am surprised to find that I can actually enjoy the girls I pick up at public dance-halls, at restaurants, along the lake front, in the park. I know a great many of them now—many of them pretty and clever, and good companions for a night. I no longer go with prostitutes. I soon found that was unnecessary. For the city is full of women who are just as lonely as I was, or who draw on their sex as I would on my bank to pay for the kind of clothes they want to wear and the kind of shows they want to see. Then, too, there are the "emancipated" women.

The person tends to act without reference to social definition. Behavior is individualized—impulsive rather than social.

Such is the social situation to which the dweller in furnished rooms is attempting to adjust. Such are three typical constellations of attitudes and personality patterns that arise as the person at-

tempts to adjust to this social situation. It is not maintained that these constellations of attitudes and personality patterns constitute—in the instance of the dwellers in furnished rooms—the criteria of well-defined social types. But if these forms of behavior are found in other social situations, nevertheless they are typical reactions to the world of furnished rooms, and illustrate the process in which social types are defined.

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SOME JEWISH TYPES OF PERSONALITY

The sociologist, in transforming the unique or individual experience into a representative or typical one, arrives at the social type, which consists of a set of attitudes on the part of the person toward himself and the group and a corresponding set of attitudes of the group toward him, which together determine the rôle of the person in his social milieu. The extent to which social types may be depicted depends upon the definiteness of the organization of the attitudes and their characteristic cohesion about a core of significant social traits. The range of the personality types in a given social group is indicative of the culture of that group.

THE JEW AS A SOCIAL TYPE

Although there is probably no people that has furnished the basis for more contradictory conclusions regarding racial and cultural traits than the Jews, the elementary question as to whether the Jews are a race, a nationality, or a cultural group remains unsettled. There are those who, with Chamberlain, believe that the Jew constitutes a clear racial type whose characteristics are unmistakable.[1] Hilaire Belloc prefers to think of the Jews not as a race but primarily as a nationality. In fact he points out that the Jews themselves have called their people a race when it suited them, a nationality when necessity demanded it, a religious group, and finally a cultural body, by virtue of the historic process, when their situation made such a status desirable.[2]

Fishberg sees in the Jew a social type. He writes:

What is that "Jewish type," that Jewish physiognomy, which characterizes the Jew? It is the opinion of the present author that it is less than skin deep.

[1] Houston Stewart Chamberlain, *Foundations of the Nineteenth Century,* II, 537.

[2] Hilaire Belloc, *The Jews,* Boston and New York, 1923.

Primarily it is dependent on dress and deportment of the Jews in countries where they live in strict isolation from their Christian or Moslem neighbors. It is not the body which marks the Jew; it is his soul. In other words, the type is not anthropological or physical; it is social or psychic. Centuries of confinement in the ghetto, social ostracism, ceaseless suffering under the ban of abuse and persecution have been instrumental in producing a characteristic psychic type which manifests itself in his cast of countenance which is considered peculiarly "Jewish." . . . The ghetto face is purely psychic, just like the actor's, the soldier's, the minister's face.[3]

What is typical of the Jews as a group is their characteristic "run of attention," or the direction of their habits and interests—which have become fixed through centuries of communal life in segregated areas—and the persistence of a set of cultural traits, most significant of which were, perhaps, those relating to their religious ritualism, which was fairly uniform throughout the world and which pervaded every sphere of life.

JEWISH TYPES

Striking as the differences between Jew and non-Jew may be, the individual and sectional differences within the Jewish group are even greater. The Jews of the East, of Asia, North Africa, and Eastern Europe, differ profoundly from those of the West. Moreover,

The Jews of any particular country, although exposed to the same general influences, are not molded into a uniform pattern. Having settled in the land at different periods, and having brought from their previous homes different modes of life and different degrees of conservatism, they resist the surrounding influences with unequal will and strength and exhibit varying grades of assimilation to the general population. In each individual country, therefore, there is a series of classes or types of Jews, shaded off from one another, and thus the multiplicity of types in the world forms an almost endless series.[4]

[3] Maurice Fishberg, *The Jews: A Study of Race and Environment,* p. 162.

[4] Israel Cohen, *Jewish Life in Modern Times,* p. 15.

While the Jews of the West have, in varying measure, had the opportunity to taste the life outside the ghetto walls, the Jews of the East have only gradually and recently come to share some of the cultural heritages of their neighbors. The diversity of the sources of Jewish immigration to the United States accounts for the corresponding multiplicity of Jewish types that are met with in every Jewish community in our large cities. These social differentiations are reflected in the religious, the vocational, and the cultural aspects of the lives of the people, and result in diverse organizations of attitudes and habits which are clearly recognizable, not only by the observer, but by the members of the group itself. They can be detected in the folk-lore and the literature, in the theater and the market place; they give rise to many problems of social organization and control; they are as complete an index as any at present obtainable of the culture traits and the culture pattern of the group.

In this discussion it is scarcely possible to do more than enumerate some of the most characteristic and picturesque personalities that are met with in the average community. From the standpoint of worldly success, especially in the vocational sphere, we meet with a personality known as *Mensch,* or, more specifically, the "allrightnick." Both types represent persons of superior economic status, but while the former has achieved his success without sacrificing his identity as a Jew, the latter, in his opportunism, has thrown overboard most of the cultural baggage of his group and, as a consequence, is treated with a certain attitude of disdain. The "allrightnick" offends the group because he is no respector of its values. The Jews have been so well known as business men ever since the Middle Ages that we should be indeed surprised to find that this vocational type lacked status, but the "allrightnick" represents the reprehensible type of business man to whom success is

everything and in whose life-organization there is no place for any of the other forms of achievement that the culture offers.

Social types seem to run in pairs and may be conceived of as opposite poles in a range of attitudes and values. At one end of the scale we find the *Mensch* and the "allrightnick"; at the other, the *Schlemiel*:

> Although the Jew has acquired the reputation of being the personification of the commercial spirit, he is sometimes quite shiftless and helpless, failing miserably in everything he undertakes, as though pursued by some mocking sprite, and good-humoredly nicknamed by his brethren a *Schlemiel*.[5]

The facility with which the Jew can adapt himself vocationally to a changing, and sometimes to a hostile, environment has often been pointed out:

> If a Jew cannot succeed in one calling he promptly adopts another, and he is a veritable "quick-change artist" in the variety of his vocations. He is a peddler, teacher, commission agent, precentor, and marriage broker by turns, regularly consoling himself with the thought that "God will help," and invariably ready to help his neighbor. It is in regard to existences such as these that Dr. Max Nordau coined the expression *Luftmenschen,* people whose only apparent means of subsistence is the air they breathe.[6]

This *Luftmensch,* who, in America, by virtue of his getting-by philosophy, is identified with the hobo, constitutes the bulk of the homeless men's problem with which Jewish social agencies have to deal in increasing numbers, probably because in America he can find support for his habits and attitudes not only in the traditional tolerance and sympathy of his own cultural group, but also in the larger group about him.

There is a type of Jew referred to by the group itself as *Schacherjude,* more familiarly known as a huckster or peddler. Here we find an illustration of the competitive process by which an alien or

[5] Cohen, *op. cit.*, p. 186.

[6] *Ibid.*, p. 210.

immigrant group is relegated to the occupations which to the native seem degrading and undesirable, but which to the immigrant represent merely the opportunity to eke out an existence.

A number of vocational types center about that Jewish institution, the synagogue. The rabbi, the teacher, the *Chazan* or cantor, the *Shochet* or slaughterer, the *Shamus* or sexton (whose place was once important and honored but has recently lost its status)—all these survive to the present day. There are still some survivors of that unique vocational type known as the *Schadchen,* or marriage broker, once an honorable and most useful occupation. These occupations, arising out of the needs of the group and centering around its institutions, tend to assume the character of professions. Even the occupation of the *Schnorrer* or beggar is so organized. The philanthropist and the beggar furnish a striking instance of the polarity of social types. The insolence of the Jewish beggar, growing out of the theory that the recipient of a gift was enabling the donor to perform a religious duty and was, in a sense, the benefactor of the donor, made the *Schnorrer* a most persistent and troublesome figure in modern Jewish society.[7]

The ideal of intellectuality which, in the ghetto of the Old World, produced the type of student known as the *Yeshiba Bochar,* or talmudical student, and the *Melammed,* or rabbinical teacher, persists, though it may be in secular form. In the olden days when religious learning was the highest virtue a prosperous merchant would prefer a poor but learned student as the future husband for his daughter; in the modern ghetto a lawyer, a doctor, an artist, or a writer are the prizes that the rich business man will seek for his sons-in-law.

The social type of the intellectual demonstrates that for the persistence of a social type there is needed a favorable set of attitudes and habits in the cultural group. There can be intellectuals

[7] Israel Abrahams, *Jewish Life in the Middle Ages,* pp. 310–11.

only in a community that prizes them, supports them by means of its wealth, admiration, and status. If the community consists only of ignoramuses the intellectuals leave it and seek those freer and more cosmopolitan centers, usually in the largest cities, where intellectuality is rewarded and can find a favorable habitat. As economic success and social status become more and more the highest ideals of the group, intellectuality ceases to serve as a means for obtaining prestige, and the intellectual as a social type is transformed and ultimately becomes extinct.

At the opposite extreme in the scale of values in the Jewish community stands the *Groberjung,* or the uncouth, uneducated individual who has no appreciation for intellectuality. Be he rich or poor, his place in the social scale is a humble and obscure one.

There is scarcely a ghetto community that does not support and attract to its midst a pious, patriarchal personage known as the *Zaddik* whose exemplary conduct is pointed to as an example worthy of emulation on the part of the young. He is held in high esteem and sometimes is lavishly rewarded with gifts of the material sort. At the opposite pole we find the apostate, or *Meshumed,* who is scorned and frequently ostracized from the community. There is also a type known as the *Kleikodeshnik,* the person who makes piousness his profession, and who, behind a mask of conformity to the ritual, lives upon and exploits a credulous public until discovered. Other types arising out of the religious complex of the group are the *Schönerjüd,* the conservative, learned, though idle, person; the *Staatsbalabos,* or the patriarchal leader; the *Kolboinik,* or the personification of all wickedness; and the *Gottskossak,* or the self-appointed judge of the piety of the members of the community.

Other well-defined types are the *Lodgenik,* or the joiner; the *Genosse,* who preaches socialism in and out of season; the *Kibitzer,* or the genial, idle joker; the *Leptcheche,* or the gossip; the "so-

ciety-lady"; the *Radikalke,* or the young lady from the ghetto, of the garrulous kind and emancipated ways, quoting from authors she has not read, very free, unmarried, and ugly.

From the point of view of the assimilative process there are several well-known types, who, arranged in a series, mark the transition from the ghetto Jew to the one who has definitely left the ghetto walls behind him and to whose children the social heritages of the ghetto will appear stranger than fiction. The *Deitchuk,* or the person affecting German background and German ways, and the *Ototot,* or the person who is almost emancipated but clings to a little beard, are typical of these intermediate stages.

These social types, ranging themselves in clusters or constellations, each with his little patronage or audience that calls him forth and perpetuates him, each changing as the attitudes and habits of the group undergo transformation and being lost as he passes from one group to another, constitute the social topography of the Jewish community. Through the sifting and allocation that goes on in the city they find their location in the different areas of settlement that make up the immigrant colony. Together they constitute the personal nuclei around which the fabric of the culture of the group is woven. A detailed analysis of the crucial personality types in any given area or cultural group shows that they depend upon a set of habits and attitudes in the group for their existence and are the direct expressions of the values of the group. As the life of the group changes there appears a host of new social types, mainly outgrowths and transformations of previous patterns which have become fixed through experience.

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III

STATISTICS OF THE CITY

A REDEFINITION OF "CITY" IN TERMS OF DENSITY OF POPULATION

In redefining a word already in common use, like "city," so as to make it serviceable for scientific purposes, one might begin with its vague popular meaning and attempt to give it the precision needed in a technical term and at the same time keep close to the current meaning, or one might begin with a theoretical analysis and so decide what characteristics need emphasis in the definition. In defining city, both in this country and in Europe, the former procedure has been followed. Starting with the dictionary statement that a city is a large and important town, the main effort has been to decide how large or populous a town must be in order to count as a city for statistical or sociological purposes.

In American census practice a city is an incorporated place having a population larger than a specified number. Originally that number was 8,000; then it was reduced, first to 4,000 and afterwards to 2,500, where it now remains. In European practice the line is usually drawn at a population of 2,000. Weber holds[1] that the village or incorporated place of less than 8,000 or 10,000 inhabitants should not count as a city, at least for international comparisons, and prefers to define city as an incorporated place with 10,000 inhabitants or more.

To this definition I have no fundamental objection. But my thinking on the subject has been aided by approaching the question along the other road and asking, not what is the common meaning of city and how may it be made exact, but what is the essential characteristic of a city population or the essential difference between that and a country population.

[1] A. F. Weber, *The Growth of Cities* (1899), pp. 2–16.

To this question I would give the following answer. A country population derives its support from the land it uses. That land produces either the food and other necessaries needed by its workers or other things which can be exchanged for necessaries. When the population becomes larger than can thus be supported, urban conditions begin to appear, and as the excess population grows those conditions become more marked. In other words, the contrast between country and city is essentially the contrast between agriculture and other means of livelihood, first as a supplement to agriculture and later as substitutes for it. It is true, of course, that when the population increases the local community thus created feels a need for greater governmental powers and obtains a charter as a village or other municipal corporation. But this is a secondary change. There are many unincorporated villages, and if their population could be obtained by a census, as the New York State censuses of 1855 and 1865 and the federal censuses of 1870 and 1880 attempted to do, I would favor excluding these also from the rural population.

The agricultural population, after a district has become well settled, maintains a relation to area which is comparatively persistent for a given region and period, but varies with the type of agriculture and the standard of living of the farming population. Consequently there is a density of population above which a purely farming community does not rise. When that density is passed it indicates that other means of livelihood are supplementing agriculture, and the density thereafter may rise indefinitely or at least is without a normal maximum. If this be so, it apparently follows that, theoretically, the division line between city and country should be determined by density of population.

My argument will be clarified by an illustration. In 1920 Tompkins County, New York, contained two places which might

be regarded as cities. One of them, Ithaca, having about 17,000 inhabitants, was included in the city tables of the census; the other, Groton, having somewhat less than 2,500 inhabitants, was classified with the country districts. Yet as the former included more than seven times as much area as the latter the density of population in Groton was somewhat greater than in Ithaca. From what I know of the population of the two places I judge that conditions in Groton are urban rather than rural, and that its residents should be regarded as part of the urban population of the county, state, and country.

In each of thirty-five divisions of the county the area has been measured, the population counted, and the density of population computed.[2] Nearly 98 per cent of the area of the county is settled with a density of between eighteen and forty-five persons to a square mile, or between 14 and 35 acres per capita. This is clearly the agricultural or rural section. Then come five incorporated villages and the most sparsely settled district of Ithaca with a total area of 6.3 square miles, a population of 3,500, and a density ranging between 300 and 861 to a square mile, or between four-fifths of an acre and slightly more than 2 acres per capita. This may be regarded as the village population in which agriculture, either on the village territory or on adjacent land, is an important, but not the dominant, occupation, and in which the importance of agriculture decreases as the density of population increases. Lastly, we have the rest of the county, including Ithaca without its village section, and Groton. These fourteen districts cover 4 square miles and have a density of population between 1,800 and 18,000, or between three and thirty persons per acre. They are the truly urban section in which agriculture has become an unimportant or impracticable occupation.

[2] This was made possible by a grant from the Heckscher Foundation for the Promotion of Research, in Cornell University.

This leads to the following classification of the population of Tompkins County in 1920:[3]

	Number of Districts	Range of Density	Area	Population	Average Density per Square Mile
Country Districts . .	15	18–45	465.7	13,543	29
Village Districts . . .	6	300–861	6.3	3,500	556
City Districts . . .	14	1888–18050	4.0	18,235	4559
Total	35	.....	476.0	35,278	74

When a similar analysis is made of the density and distribution of population in other counties I believe that the results will usually be similar to the above.

If the fundamental difference between country and city is, as I believe, the difference between agriculture and the group of other occupations, then the best line between city and country is a density of population below which agriculture must be almost the only occupation and above which it is unimportant or absent.

The definition of city here suggested cannot be generally applied at present or in the immediate future because, until the topographic map of the United States or any smaller area to be studied has been published and the requisite areas have been defined upon it and measured, the density of population cannot be computed for the small districts this definition requires. None the less, I think it advantageous to look forward to this definition as an attainable and desirable goal, perhaps not to displace, but at least to supplement and interpret, our present crude distinction between city and country.

It will be noticed that the division between city and country would depend upon the fertility of the soil, the intensity of its cultivation, and the standard of living of the agricultural population. No common density point could be used in America, Europe, and

[3] The detailed figures on which this table is based are given at the end of the article.

Asia, as the division between rural and urban or semi-urban, and perhaps none for the various parts of the United States. Still, the point could be easily fixed for a large area and a specified date provided the density of population of a large number of small areas was available. The agricultural districts would all have a low and comparatively uniform density, the other districts would have a much higher average density and a wide range above the minimum.

The present classification is false to the facts in being a dichotomy, either city or country, whereas many districts show characteristics of both. The suggested definition lends itself admirably to a threefold classification: the country or agricultural districts, the villages in which both agriculture and other occupations are important, and the cities from which agriculture has been crowded out. They might be defined as follows:

The country includes all districts in which the density of population per square mile is less than 100 and in which presumably agriculture is almost the only occupation.

The villages include all districts in which the density of population per square mile ranges from 100 to 1,000, and in which agriculture and other occupations coexist but with a diminishing importance of agriculture until, at the higher limit, it disappears.

The cities include all districts in which the density of population per square mile is more than 1,000 and in which there is practically no agriculture.

This suggestion for a redefinition of city may be compared with one in an issue of *Die Bevölkerung der Erde*[4] which was devoted to the statistics of cities, *Ortsstatistik*. In the preface to that work Supan wrote: "Places with more than 2,000 inhabitants are usually called cities in the economic sense; French official statistics have adopted this practice. But we believe that the numerical limit be-

[4] Petermann's *Mittheilungen Ergänzungsband*, XXIII (1893), Heft No. 107.

tween city and country is a fluctuating one and rises with increasing density of population." In accordance with this conviction Supan treated as cities, in very sparsely settled regions, all places with more than 1,000 inhabitants; in sparsely settled districts he set the limit at 2,000; and in densely settled districts, at 5,000. The present suggestion looks toward an inductive study of the actual

DENSITY OF POPULATION IN EACH OF THIRTY-FIVE SUBDIVISIONS OF TOMPKINS COUNTY, NEW YORK (1920)

Enumeration District	City, Village, or Town	Area in Square Miles	Population	Density of Population
Country Districts				
175* . . .	Dryden	46.37	849	18
197† . . .	Newfield	58.57	1,154	20
172 . . .	Danby	54.18	1,145	21
176 . . .	Enfield	37.02	866	23
173† . . .	Dryden	19.09	487	26
171 . . .	Caroline	27.86	809	29
170 . . .	Caroline	25.46	733	29
174§ . . .	Dryden	26.06	840	32
199 . . .	Ulysses	24.75	852	34
178 . . .	Groton	22.49	764	34
198‖ . . .	Ulysses	7.03	241	34
195 . . .	Lansing	39.08	1,449	37
177 . . .	Groton	26.80	1,123	42
196 . . .	Lansing	21.79	931	43
194¶ . . .	Ithaca Town	29.16	1,300	45
Total		465.71	13,543	29
Village Districts				
174 (part) . .	Freeville	1.01	303	300
197 (part) . .	Newfield	.88	302	343
194 (part) . .	Cayuga Heights	.44	179	407
173 and 175 (parts)	Dryden	1.62	707	437
198 (part) . .	Trumansburg	1.18	1,011	857
180 . . .	Ithaca	1.16	998	861
Total		6.29	3,500	556

(*Continued on Page 121*)

* Excluding Dryden and Freeville villages.
† Excluding Newfield village.
‡ Excluding Dryden and Freeville villages.
§ Excluding Freeville village.
‖ Excluding Trumansburg villgae.
¶ Excluding Cayuga Heights village.

DENSITY OF POPULATION—*Continued*

Enumeration District	City, Village or Town	Area in Square Miles	Population	Density of Population
City Districts				
191 . . .	Ithaca	.76	1,435	1,888
181 . . .	Ithaca	.39	773	1,982
193 . . .	Ithaca	.70	2,327	3,324
179 . . .	Groton	.59	2,235	3,788
189 . . .	Ithaca	.52	2,146	4,126
188 . . .	Ithaca	.21	968	4,609
185 . . .	Ithaca	.15	976	6,507
182 . . .	Ithaca	.16	1,106	6,875
183 . . .	Ithaca	.12	863	7,192
184 . . .	Ithaca	.07	853	12,186
190 . . .	Ithaca	.08	982	12,275
187 . . .	Ithaca	.07	860	12,286
192 . . .	Ithaca	.12	1,628	13,567
186 . . .	Ithaca	.06	1,083	18,050
Total		4.00	18,235	4,559
Grand Total		476.00	35,278	74

conditions in a given state or country as the means for determining where the line or lines should be drawn.

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AMERICAN CITY BIRTH-RATES

It has long been known that cities grow more rapidly than rural communities.[1] Three factors contribute to urban expansion: (1) extension of territory, (2) surplus immigration, and (3) excess of births over deaths. Omitting the first two, let us see how fast American cities increase by producing their own generations.

Urban death-rates, at most ages for both sexes, exceed those for country dwellers of the same race.[2] Also, the proportion of married persons fifteen years of age and over is generally less in American cities than in rural sections.[3] These two facts would suggest lower genetic rates for towns than for the open country. But on the other hand census data show that cities have a disproportionately large percentage of people between the ages of fifteen and forty-five.[4] Moreover, towns include more than their share of foreigners, whose birth-rates are higher than those of natives.[5] These conditions tend to reduce crude death-rates and to exaggerate statements of urban natality. To adjust crude rates for differences in composition of population we need standard birth-rates by age, nativity, and race of mothers, comparable to specific mortality tables.

It is difficult to find such tables applicable to varying conditions in the United States. However, by basing the average number of legitimate births to mothers of given age, nativity, and color in the registration area for 1919–20, upon the total number of married

[1] See Weber, *Growth of Cities in the Nineteenth Century,* chap. ii.

[2] See *United States Life Tables,* 1901–10, pp. 104–11; *United States Abridged Life Tables,* 1919–20, pp. 12–15.

[3] See *Fourteenth Census,* Vol. II, pp. 576–77.

[4] *Ibid.,* p. 371.

[5] See *United States Birth Statistics* (1921), pp. 14–16.

women in the registration states[6] (classified in like groups), according to the 1920 census, we have a set of useful natality indexes. See Chart I.

These figures would be more dependable if they included more years of experience, because the number of births in 1919 was un-

CHART I

LEGITIMATE BIRTH-RATES, REGISTRATION AREA, 1919–20

MOTHERS' AGE	15–19	20–24	25–34	35–44
NATIVE WHITE				
LEGIT. BIRTHS	80798	277861	435235	137893
MARRIED WOMEN	260016	1291021	3502244	2872021
AV. AN. RATE	.31074	.21523	.12427	.04801
FOREIGN WHITE				
BIRTHS	11075	71361	182937	74903
WOMEN	25012	208058	838653	830839
RATE	.44281	.34299	.21813	.09015
NEGRO				
BIRTHS	10870	27528	34205	13238
WOMEN	32848	127610	243936	193369
RATE	.33092	.21572	.14022	.06846

usually low. They would also be more accurate if they comprised the issue of women of unclassified ages, and if supplemented by indexes for illegitimate births.[7] But use of data for 1921 and 1922 is difficult because the statistics for these years combine legitimate and illegitimate births, and also fuse Negroes with other colored people. The figures for illegitimacy show a tendency to scatter in the upper ages and to vary widely from year to year. Distributing

[6] Excluding Nebraska (added to registration area in 1920).

[7] Refinement might also be introduced for husbands' ages, duration of marriage, and previous offspring.

mothers of unknown age according to proportions of those classified is a doubtful aid to accuracy. The indexes presented account for 95.24+ per cent of more than 2,850,000 births (within two years) in a census population of nearly 62,000,000.

Having roughed out these tools, what can we do with them? In the absence of specific local natality rates we can use these indexes as norms to adjust crude birth-rates for differences in composition of population, as standard mortality rates are applied to find the comparative incidence of death in dissimilar communities.[8] For instance, the average birth-rate for the registration area in 1919–20

TABLE I

	A Birth-Rate	B Death-Rate	A–B Genetic Rate
1. Crude	23.5	13.1*	10.4
2. Adjusted	19.1	14.5*	4.6
3. Difference	—4.4	+1.4	—5.8
4. Percentage of crude rate (3/1)	18.7	10.7	55.8

**United States Mortality Rates*, 1910–20, p. 15.

is 23; the calculated urban rate on registration experience is 25, and the calculated rural rate is 20. The computed rates divided into the general one give adjustment factors of .9 and 1.13, respectively, for all cities and country sections in the United States.[9] Applying these factors to the average crude birth-rates for urban and rural communities at this time, we find that their order of magnitude is reversed. The crude urban rate, 23.2, becomes 21; and the crude rural ratio, 22.8, becomes 25.8. In brief, judged by the potential fertility of their population upon the basis of experience in the registration area, cities as a whole were not producing their full share of children. In fact, they were furnishing only about 84

[8] See Newsholme, *Vital Statistics* (1924), pp. 86–87; also Whipple, *Vital Statistics* (1923), pp. 246–49; and Knibbs, *Mathematical Theory of Population*, pp. 236–44.

[9] Assuming that the composition of population in all places having 2,500 inhabitants or more (the census basis) does not differ materially from that in places comprising 10,000 persons or more (the basis of birth statistics).

per cent of their quota, and were adopting a large proportion of those born outside.

Take a specific instance. In 1920 the rates for New York City were as shown in Table I.

It is only fair to state that adjustment of birth-rate was made by the method before used, which probably enlarges divergence from the crude figure. As a matter of convenience the adjusted death-rate was taken directly from the *United States Mortality Rates,* which uses the standard population method. This latter probably minimizes the difference for a mixed population like that of New York. Such combination of methods may therefore yield a result which is compensated for aberration in either direction.

The purpose here is not to attempt to prove that the actual figure for rate of increase by excess of births over deaths is wrong, but merely to give some adequate idea of what this rate would be if birth-rate were not reinforced by the presence of so large a proportion of young mothers; and if high death-rates at each age were not masked by the large percentage of men and women in the vigor of youth.

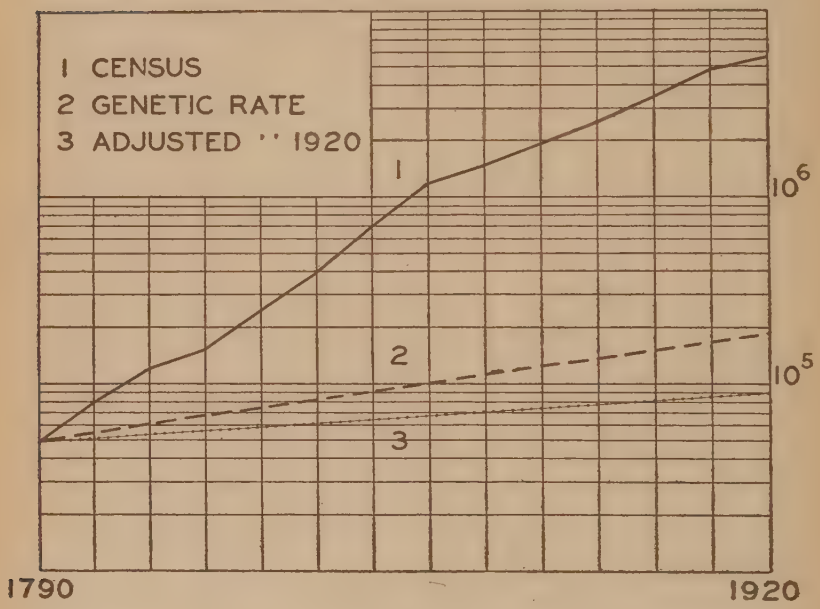
The calculated genetic rate, therefore, is not the statement of an objective fact, any more than a discounted note equals its face value. It is simply a quantitative expression for the consequences of a supposition, namely, that a population like that of New York City in 1920 would probably show some such tendency, if deductions were made for its unusual composition. For scaling down its excrescences, registration-area experience can be used as a reasonable basis of measurement.

In 1790 the population of New York was 49,401; in 1920 it was 5,620,048. That is an increase of 114 times at an average rate of .037 per annum, which doubles the number in nineteen years. See Chart II, line 1.

Now if we apply the crude genetic rate for 1920 to the local population in 1790, within 130 years their offspring would amount to about 190,000 (less than four times the base).[10] If we apply the

CHART II

POPULATION, NEW YORK CITY



adjusted rate, it yields about 90,000 (less than twice the original number).[11] In other words, if the 1920 rate of natural increase had prevailed, the early inhabitants of New York might have produced about 3⅓ per cent of the recent population. Or, if this performance is discounted for favorable marital composition, they might

[10] See line 2 in Chart II.

[11] Line 3, *ibid.*

claim credit as ancestors of only sixteen persons in every thousand in the city. Obviously immigration accounts for most of the growth.

The total movement of city population may be likened to the course of a ship sailing down a river, propelled by engines, sails, and the current. If we compare migration to the flow of the stream and regard excess births, due to a favorable proportion of mothers, as the pull of the canvas, then adjusted genetic rates represent the speed due to the motors alone. Cities appear to make rapid headway from the push of these external forces rather than from exceptional vital energy developed within. We may say that cities transform more physical power for social use than they generate.

Applying this comparison to Chart II, we may regard it as the log of the good ship New York City for a thirteen days' run. Then the upper line, 1, represents her speed throughout the voyage. The distance between lines 1 and 2 shows the rate of drift due to favoring currents. The interval between lines 2 and 3 indicates acceleration by favorable winds, as estimated from their velocity during the last night watch. The slant of line 3 measures the duty of her engines, as tested by counting the revolutions of her propellers for a few hours. Now if this test can be applied to her performance throughout the trip, the old boat floated a farther distance than she could have made by her own headway within three months. Interpreting these apocryphal days in terms of years, the figures mean that, at the unaccelerated genetic rate, the city of New York would not have produced the population enumerated here in 1920 within a thousand years after 1790.

Take as another example a young city of rapid growth. In 1870 Seattle had a population of 1,100; in 1920 it numbered more than 315,000—a turnover of 286 times within fifty years. Clearly this increase far surpasses ordinary rates of human fecundity.

If the age composition of this population in 1920 is compared with that of a stationary group of the same size maintained by

births only and diminished by death alone,[12] striking differences appear. See Chart III.

TABLE II

	Census Population (Percentage)	Stationary Group (Percentage)
Under 20 years	29	33
20 to 50 years	55	41
Over 50 years	16	26

Here again is evidence of extensive urban immigration.

The large proportion of people between the ages of twenty and fifty should yield a low crude death-rate and a high crude birth-rate for the city. As a matter of fact the average birth-rate for the years considered was 19, and the death-rate, 10, leaving an apparent genetic rate of 9 per mille per annum. In comparison, our imaginary static population would have a birth- and death-rate of nearly 17.57. Evidently Seattle has been more successful in maintaining life than in producing it.

If we consider the number of persons born in the city and surviving at mortality rates for 1920,[13] we find that about 24 per cent of the last census population might have been produced locally.[14] However we are confident that this figure represents the maximum. Only within the last twenty years have annual births equaled the population under one year of age. Many young children have recently come to the city, and others born therein have moved away.[15]

[12] Seattle life-table calculated from deaths registered in 1919–20, and age distribution of the fourteenth census.

[13] See line 3 in Chart III.

[14] Approximately the proportion of those born in the state (23.9 per cent), as given by the fourteenth census. It is estimated that 55 per cent of the population in 1920 moved into the city after 1900.

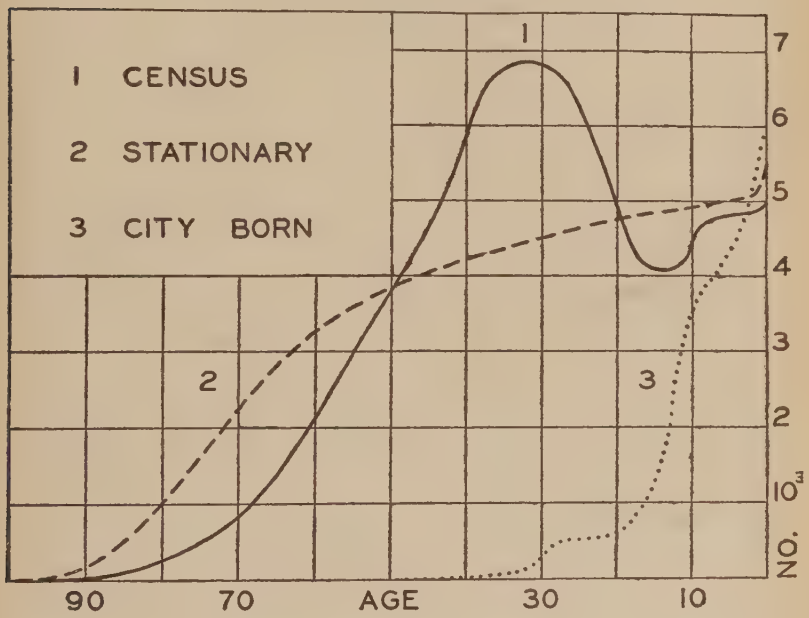
[15] Comparing 1920 returns with our figures for surviving local births, we find the following net migration:

	Census	Surviving Births	Net Migration	Proportion
Under 2 years	9,845	11,149	−1304 (out)	11.7 per cent of Births removed
Two to 10 years	38,106	33,592	+4514 (in)	11.8 per cent of Population added

The data presented indicate how large is the migratory population of urban centers. The facts concerning genetic rates show that city mothers in general have not been producing their quota of successive generations. When adjusted by standard experience, city

CHART III

POPULATION, SEATTLE, 1920



death-rates are higher, and their birth-rates lower, than crude figures disclose. Only by the calculation and use of specific local mortality and natality tables can we discover the actual trend of life in these expanding areas of intense social pressure.

In conclusion, the following table and chart are presented to illustrate the use of specific birth-rates for analyzing and comparing tendencies of natality in a typical city. Data for Wash-

ington are readily segregated in federal statistics because the urban District of Columbia is a unit of enumeration, like a state. The table is self-explanatory, and serves to interpret the graph. The latter is simply a spatial representation of the $\frac{\text{District of Columbia}}{\text{Registration Area}}$ values in the table, arranged to show their interrelation.

TABLE III

LEGITIMATE BIRTH-RATES
DISTRICT OF COLUMBIA AND REGISTRATION AREA, 1919–20

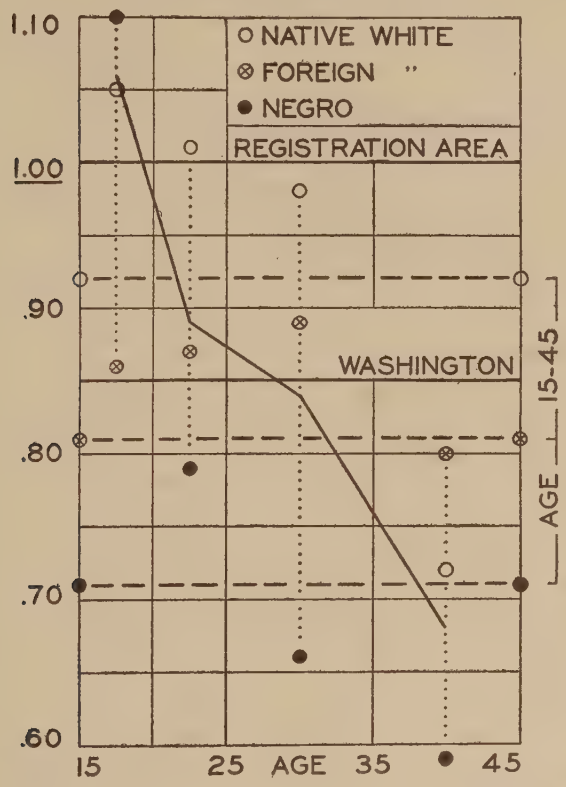
	Mothers' Ages				
	15–44	15–19	20–24	25–34	35–44
All Classified:					
District of Columbia	.1101	.3416	.2059	.1196	.0391
Registration Area	.1302	.3232	.2316	.1423	.0572
District of Columbia/Registration Area	.85	1.06	.89	.84	.68
Native White:					
District of Columbia	.1087	.3253	.2166	.1222	.0347
Registration Area	.1176	.3107	.2152	.1243	.0480
District of Columbia/Registration Area	.92	1.05	1.01	.98	.72
Foreign White:					
District of Columbia	.1528	.3788	.2993	.1939	.0720
Registration Area	.1789	.4428	.3430	.2181	.0902
District of Columbia/Registration Area	.81	.86	.87	.89	.80
Negro:					
District of Columbia	.1024	.3634	.1712	.0932	.0403
Registration Area	.1436	.3309	.2157	.1402	.0685
District of Columbia/Registration Area	.71	1.10	.79	.66	.59

In Chart IV all rates for the registration area are taken as unity, and divergencies of local rates from this common base are reckoned in percentages. If the reader remembers that each several rate for Washington is compared with its own corresponding value for the larger area, its relative position can be located at a glance. Thus, beginning at the upper left-hand corner, we find that in the District of Columbia the birth-rate for married colored girls between the ages of fifteen and twenty averaged 10 per cent higher

than the rate for the same class in the whole area. Continuing downward to the right, we see that the Washington rate for all three

CHART IV

BIRTH-RATES, WASHINGTON, 1919–20



classes of married women between twenty and twenty-five years was 11 per cent below par; that for all classes of married women between fifteen and forty-five it fell 15 per cent; and for all foreign white wives it was only 81 per cent of their normal expectancy.

The graph shows clearly how great the proportionate difference

is for each population class, and indicates (by the broken diagonal line) a tendency for such divergence to increase in a negative direction with the age of the mothers. Moreover, it appears (from the dashed lines) that at this time in Washington the foreign-born white and Negro married women as a whole fell below their respective registration-area natality norms more markedly than did native white mothers.

Comparison of similar or divergent tendencies in other cities would be interesting and instructive. Further differentiation of groups and correlation of their vital indexes with local circumstances might lead to better understanding of the direction of human development in urban centers. This paper is presented with the hope that it may stimulate more careful study of vital rates and suggest more accurate methods of measuring their trends.

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SOME ECONOMIC FACTORS IN THE DETERMINATION OF THE SIZE OF AMERICAN CITIES

The particular economic factors here dealt with are certain measurements of industry used in the United States census of manufactures: the value of manufactures, the value added in the process of manufacturing, the value of the raw materials used, the aggregate of wages, the amount of "primary horse-power." Other economic factors, such as various measures of commerce and trade —bank clearings, car loadings, tonnage of freight by land or water —are not considered, though their pertinence is not denied. This study undertakes to discover the degree of correlation between the size of urban populations and these various quantitative aspects of industry. Of course there is a causal relationship between commerce and industry. No industrial city consumes all of its own manufactured goods, nor produces all of its raw materials. It must therefore have commerce with the outside; and of course the mere handling of its own products for local consumption occupies numbers of workers. Hence the commercial factor in the determination of urban sizes calls for analysis too, in so far as data are available.

The method used in this study is that of the utilization of the Pearson correlation coefficient and of the correlation ratio. But before discussing the results of the study certain facts of a purely statistical nature must be touched on.

A. THE TYPE OF THE DISTRIBUTIONS

If the cities of the United States with 2,500 inhabitants and over in 1920 are classified according to size, the largest class is between 2,500 and 5,000—nearly half of all of them; slightly over one-fourth are between 5,000 and 10,000, about one-sixth between

10,000 and 25,000, and less than one-twentieth between 25,000 and 50,000. Graphically they fall into a reversed *J* curve, which tends to be asymptotic with the *X*-axis. This study is limited to those 10,000 or over in size; in the 1910 census no cities of over 100,000 are considered; three coefficients are worked out for cities of over 100,000 in 1920; the remainder are limited as for 1910. This limitation is deliberate. The largest cities, because of their extreme size and small number, would have too great an influence upon the coefficients to permit a fair conclusion for cities as a whole.

In the cases of the cities of 10,000 and over, distribution of each of the measures of industry is found to fall into this same general reversed *J* type, the frequency of the group of lowest values being in all cases larger, and in most cases very much larger, than that of the next group of larger values.

The problem of correlation by the use of the product-moment method is considerably complicated (at least in interpretation of results) by these facts. The reliability of the Pearson *Y*, as measured by the probable error, is based on the assumption of at least a rough approximation of the two variables to a normal or Gaussian distribution. It is clear that in the case of this material this assumption is entirely untenable. A similar case, however, is found in the fact that nearly all the economic statistics involving the use of correlation in time series (as was pointed out by Professor Persons in his presidential address before the American Statistical Society in 1923) must be interpreted with great care, because another fundamental assumption, that of random selection, is obviously not tenable there.

Naturally, then, the correlation tables reflect the type of the original distribution. The cells of the table containing the lowest values of *X* and *Y* contain an overwhelmingly large proportion of the cases. As the values increase the cases become relatively fewer

in both X and Y directions, and empty cells are more numerous; the table tends to spread out in a rough fan-shape.

This type of distribution tends also to introduce a factor of exaggeration in the coefficients due to the undue importance which cases at the extremes have in determining the value of the product moments. Moreover, because of the concentration of the cases in the smaller-value classes, the means are located near the smallest values of the distributions instead of near the middle of them; the great mass of the cases is located in the positive quadrants of the tables. For similar reasons the standard deviations tend to be large, and so to neutralize the high positive values of the product-moments.

B. LINEARITY

What significance linearity of correlation has in the case of non-normal distributions is difficult to say. With few exceptions the points indicating the mean values of X (population) for the several values of Y (the other variable) tend to lie along straight lines through the more dense sections of the tables; but at the extremes they turn more or less sharply in a positive Y, and sometimes also in a negative X, direction. In other words, the distribution tends to be linear throughout the great mass of the cases, and becomes non-linear where the extreme cases control that are not infrequently quite irregular in location. Table I shows that the correlation ratios differ from the correlation coefficients by an amount sufficiently great in most cases to indicate non-linearity of correlation, when the entire table is taken into consideration.

Having raised these questions as to the reliability of our data, we have next to consider what the prima facie results are.

The correlation coefficients in Table I show relatively slight difference between 1910 and 1920. They are great enough, however, to warrant us in stating that the results there obtained are not necessarily immutable laws of the interrelation of population and

these several measures of industry. Analysis of the figures of earlier or of future censuses may reveal quite different correlations. The correlations as a whole (neglecting their division by censuses) fall roughly into three size classes; "Primary horse-power" seems clearly to be the least correlated with size of cities, and is in a class by itself. The correlations of population with "value of manufactures," "value added," and "value of raw materials" are closely grouped, ranging from .65 to .68. Two other pairs, "wages paid,"

TABLE I

CITIES 10,000 TO 100,000 IN POPULATION, 1910 AND 1920

Pairs of Variables	Number of Cities		Correlation Coefficient		Correlation Ratio	
	1910	1920	1910	1920	1910	1920
I. Population. Value of Manufactures	529	650	.68±.02	.68±.01	.76±.01	.77±.01
II. Population. Value added	531	647	.68±.02	.66±.01	.78±.01	.81±.01
III. Population. Value raw material	...	562	.....	.65±.02	.....	.77±.01
IV. Population. Wages paid	529	562	.75±.01	.71±.01	.77±.01	.75±.01
V. Population. Primary horse-power	529	562	.46±.02	.51±.02	.63±.02	.63±.02
VI. Population. All workers in manufacturing	525	652	.73±.01	.72±.01	.74±.01	.77±.01

and "all workers in manufacturing" form a natural class, ranging from .71 to .75. Taking into consideration, however, the qualifications of the use of the Pearson coefficient in non-normal distributions, it is best to be cautious about drawing conclusions from the differences between the values of Y for the last two classes. The fact that the whole population of a city includes "all workers in manufacturing" may account in part for the correlations of .73 and .72; moreover there is probably a high correlation between "all workers in manufacturing" and "wages paid." This suggests the advisability of the continuation of this study in the direction of the use of multiple and partial correlation coefficients.

Table II reveals certain data for 1920 not computed for 1910.

The first three pairs of correlation coefficients give us the opportunity of contrasting the upper and lower halves of the population distribution in the correlation table. In each of these pairs we see that the correlation for the smaller cities, which are so much more numerous, is definitely lower than that for the entire group of those 10,000 to 100,000. The relatively few cities above 50,000 in population pull the coefficient up very notably in each case. This is

TABLE II

THE EFFECT OF RANGE OF SIZES OF CITIES UPON THE SIZE OF THE CORRELATION COEFFICIENTS

Pairs of Variables	Range of Population	Correlation Coefficient
Population and value of raw material . .	10,000–100,000	.65±.02
	10,000–50,000	.51±.02
Population and wages	10,000–100,000	.71±.01
	10,000–50,000	.52±.02
Population and horse-power	10,000–100,000	.51±.02
	10,000–50,000	.37±03
Population and value of manufactures . .	Over 100,000 (excluding New York, Chicago, Philadelphia, Washington)	.90±.02
Population and value of manufactures . .	Twenty-five largest	.88±.03
Population and value of manufactures . .	Twenty-five next largest	.36±.12

due to two facts: they are relatively far from the means of the correlates of wages (value of raw material, of wages, amount of horse-power); and they lie in general in the positive Y direction from the regression line that would be determined by only the data for cities under 50,000.

This general tendency is emphasized when we consider the fifty cases (excluding the three largest and Washington) above our arbitrarily chosen limit of 100,000 population. Here the correlation of all is .90; but for the highest group of twenty-five it is .88, and for the lower twenty-five is only .36. The extreme lowness of this figure as compared with the .68 obtained for all cities 10,000–

100,000 is hard to interpret. The small number of cases weakens the reliability of both these figures, however.

It is difficult to draw any final conclusions from the figures of this last table. The mathematical limitations on their reliability are obvious. But since we are forewarned on this point, it may be fair to say that on the face value of the coefficients we are at least justified in suggesting the following deduction:

The correlation between population and the several measures of industry seems to increase as the size of the cities increases, and that hence the industrial factors are more potent as the size of the city increases.

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With Harold Adams *and* Roman Pozderski

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THE URBAN EXPECTATION OF LIFE IN 2000 A.D.

If the length of human life continues to increase at the rate indicated by the experience of the past three centuries the expectation of life of babies born in the year 2000 will be over 100 years.

Reliable life-tables are available for no earlier period than the sixteenth century, in Switzerland. Outside of Switzerland the earliest authentic estimates of expectation of life date from the early nineteenth century in France and Sweden. As more recent decades are reached, life-tables become available for increasing numbers of countries. For the United States the expectation of life in Massachusetts for the year 1855 has been reliably calculated. The general registration area furnishes no such table for any date previous to 1901. For dates since 1912 expectations of life for foreign countries are not available.

A compilation of the expectations of life in various countries according to periods of time makes it possible to draw certain tentative conclusions as to the probable future trend of life-expectation. Since the data in general are drawn from countries with predominantly urban populations, and since the most recent data relate to the United States registration area, which includes the most thickly settled section of the country, and data from the industrial-policy experience of the Metropolitan Life Insurance Company, which includes almost, if not entirely, urban population, it is safer to regard the conclusions as applying to urban centers rather than to the United States as a whole.

From a study by Dr. Louis Dublin[1] and investigations by the writer it appears that the trend of expectations of life has been

[1] *The Possibility of Extending Human Life.* New York: Metropolitan Life Insurance Company, 1922.

steadily upward since the sixteenth century. The expectation of life in Switzerland has risen from 21 years in 1550 to over 50 years in 1910. Other countries all show a similar trend. Not only have the expectations been increasing, but the increases in expectations have also been accelerating. Before 1875 the average gain per decade was about .8 years; since 1850 the gain has averaged 3.2 years per decade, or a rate of progress four times as great as that in the earlier period.

This radical upward sweep of the curve began just after the demonstration of the germ theory of disease in 1865. From 1901 to 1925 the expectation of life in the original registration states increased from 49 years to about 58 years, or at a rate of 3.7 years per decade. With reference to the lower wage-earning groups in the urban population of the United States, the Metropolitan Life Insurance Company experience with its 16,000,000 industrial policyholders is significant. Between 1911–12 and 1924–25 the expectation of life *at the age of ten* for such white policyholders has been raised from 48.1 years to about 54.3.[2] This indicates that the urban expectation of life, under the conditions provided for these 16,000,000 policyholders, was being extended at the rate of 4.8 years per decade.

On the basis of these trends what expectation of life is likely to be attained by the year 2000? Four different hypotheses are defensible. The first is that our civilization is likely to break down between now and 2000 A.D., with a resulting disastrous setback in life-expectancy such as has apparently occurred in previous dark ages. Here is not the place even to summarize the arguments pro

[2] This figure is my own estimate, based upon data published by the company. The 1921–22 expectation as given by the company was 53.2. The death-rate for 1924 was the lowest in the history of the company, and for the first six months of 1925 was as low as for the corresponding period in 1921, which was the previous record.

and con relative to this hypothesis; I can only state my own belief that this outcome is unlikely.

A second hypothesis might be that the possibilities of reducing the death-rate have been about exhausted; that the control of infectious diseases, the reduction of infant mortality, and the effects of improved standards of living have used up the easier reductions in death-rates, and that from now on, while further improvement is still possible, nothing as spectacular as past gains can be expected. On this hypothesis decreasing gains in life-expectation may be expected, with a gradual approach to an upper limit at, say, 65 years.

A third hypothesis might be that medical science has now found its stride, and that further gains in life-span may be expected at about present rates. Under this hypothesis if the gain of 3.7 years per decade which has been achieved in the original registration states of the United States were carried forward until 2000 A.D., the expectation at that date would be about 87 years.

The fourth hypothesis would hold that not only the present rate of gain in expectation can be maintained, but that the present rate of increase in the rate of gain can be carried on, and even that the upward sweep of the curve will continue to accelerate. If present increases in the rate of lengthening of the life-span were to continue, about .44 years would be added to the gain each decade; in 2000 A.D. the span would be lengthening at about the rate of 8 years per decade, and the expectation of life at birth would have reached about 104 years. If the line of gains in life expectancy were to follow a regular curve along its present tendencies rather than a straight line, the expectation of life at the end of the present century would be much over 100 years. Indeed, such a curve forecasts emphatically the practical elimination of disease and of old age through scientific discoveries in the next few centuries.

That this fourth hypothesis is the most plausible one is the be-

lief of the writer. This belief is based upon facts which can only be summarized here:

1. The tendency for the past million years has been toward accelerating increases in man's power to control his environment. This is conclusively shown by the study of the cutting tools used by man from the Pliocene age, hundreds of thousands of years ago, up to 1925. In a more definitely measurable way this acceleration is obvious in such variables as the speed with which man has been able to move, the rapidity with which he has been able to make copies of a message, the length of the span over which he could erect a bridge, the speed with which new inventions have been diffused over the world, and the distance at which one man could kill another. Curves drawn to represent any one of these accelerating developments will suggest the same upward sweep which is evident in the line representing gains in expectation of life.

2. The world has already regained the loss in expectation of life resulting from the war. The United States census volume on mortality statistics for 1922 gives death-rates for the United States, Australia, Austria, Chile, France, Germany, Japan, New Zealand, Spain, Sweden, and the United Kingdom for a series of years. The average of the best years before 1918 in these respective countries is 16.2 deaths per 1,000 of population. The average of the respective best years since 1918 is 16.3 deaths per 1,000. This is the case although data for 1921 and 1922, which were the healthiest years for other countries, were not yet available for Germany and Spain.

3. Although most of the gains of life-expectancy before 1910 were due to prevention of deaths in the earlier age periods, since that time the expectation of life for older men and women has ceased falling and started to increase. Medical science is beginning to cope successfully with the diseases of later life.

4. Instead of showing signs of having used up the major possibilities in preventive medicine, research in this field is making new

major discoveries which bid fair to eclipse past attainments in life-saving. The discoveries relating to internal secretions and to the functions of vitamins are just beginning to be exploited. An antiseptic many times as powerful as any in past use has very recently been discovered. Important progress is being made in relation to cancer and diseases of the heart and blood vessels—two of the most serious causes of death in later life. The potential immortality of the cells of the body has been demonstrated. Not only are such discoveries being announced with increasing frequency, but new research laboratories are constantly being opened, new apparatus and new technique are being discovered and brought into use, an increasing number of trained investigators is available, and unprecedented funds are being placed at the service of scientists in this field.

In planning for the future of society sociology must take into account the unquestionable fact of accelerating material progress and, in particular, must recognize the probability of the continuation of such progress in the extension of human life. We may predict with more certainty than that with which Jules Verne predicted the submarine, or Bacon the automobile and airplane, that in the year 2000 A.D., unless we wreck our civilization before that date, many a baby will be born with two hundred years or more of life before it; and that men and women one hundred years of age will be quite the normal thing, but instead of being wrinkled and crippled they will still be in their vigorous prime.

HORNELL HART

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THE STATISTICAL RELATIONSHIP BETWEEN POPULATION AND THE CITY PLAN

Population problems as they are related to regional and to city planning naturally group themselves into three general classes, relating respectively to population distribution, population growth, population economics.

A. POPULATION DISTRIBUTION

If the incorporated communities in the Continental United States are arranged in groups the limits of which start with 2,500 and are doubled with each step (2,500 to 5,000, 5,000 to 10,000, 10,000 to 20,000, etc.), it will be found that the numbers in each group are related in precisely the same way as are those given by the mathematics of probabilities for sequences of different dimensions in the tossing of a coin or the drawing of white balls from a bag which contains large but equal numbers of black and white ones. This is shown in Table I, but is especially evident when the quantities are plotted logarithmically.

That this relationship is not peculiar to the 1920 census distribution is seen from the figures for the two smallest groups and for the totals for the three preceding decades compared with the mathematical frequencies (see Table II).

On the basis of this relationship it is possible to develop a formula which will give the distribution and size of the communities in any group. In this manner the size of the community which comprises the single member of the largest group can be computed. In logarithmic form the formula is

$$\log P = \log N + \log a - \tfrac{1}{2} \log 2$$

TABLE I

Numbers of Communities of Grouped Sizes Compared with Chances of Drawing Sequences of Different Dimensions

Population Groups: Lower Limit	Population Groups: Upper Limit	Number of Incorporated Places in the Group	Size of Sequence	Chances of Securing Sequence of Size Given in 2,787 Throws
2,500	5,000	1,320	1	1,393
5,000	10,000	721	2	697
10,000	20,000	388	3	348
20,000	40,000	174	4	174
40,000	80,000	98	5	87
80,000	160,000	45	6	44
160,000	320,000	22	7	22
320,000	640,000	11	8	11
640,000	1,280,000	5	9	5
1,280,000	2,560,000	2	10	3
2,560,000	5,120,000	0	11	1
5,120,000	10,240,000	1	12	0
Total	.....	2,787	..	.....

TABLE II

Numbers of Communities of Two Lowest-Size Groups for Four Decades Compared with Chances of Drawing Sequences of Corresponding Dimensions

Census Date	Total Number of Communities of 2,500 and Over	Number of Communities: Between 2,500 and 5,000	Number of Communities: Between 5,000 and 10,000	Number of Communities: Total Between 2,500 and 10,000
1920	2,787	1,320	721	2,041
1910	2,313	1,106	621	1,727
1900	1,801	893	468	1,361
1890	1,429	726	339	1,065

Census Date	Total Throws	Number of Sequences in Total Number of Throws in Sequences of 1	Number of Sequences in Total Number of Throws in Sequences of 2	Total of Sequences 1 and 2
1920	2,787	1,393	696	2,089
1910	2,313	1,156	578	1,734
1900	1,801	900	450	1,350
1890	1,429	714	357	1,071

in which P is the population of the largest city, N is the total number of all communities larger than a, which is the minimum size of community considered (in this case it is 2,500).

Table III gives the result of computations for four decades.

The distribution of population among communities of different sizes having been examined in its relation to mathematical probability, it is interesting to turn to the distribution within any given aggregation. Population density corresponds to the mathematical frequency of distribution of shots on a target, for example. A curve which shows the average population density with increasing dis-

TABLE III

THEORETICAL SIZE OF LARGEST CITY COMPARED WITH ITS ACTUAL POPULATION

Date	Population		Difference (Percentage)
	Theoretical	Actual	
1920 . . .	4,927,000	5,620,048	11.4
1910 . . .	4,089,000	4,766,883	11.6
1900 . . .	3,184,000	3,437,202	10.8
1890 . . .	2,526,000	2,507,414	1.0

tance from the center of greatest activity should therefore have some relationship to a normal frequency curve. An effort was made to fit such a frequency curve to several density curves, with astonishingly satisfactory results. Only immaterial differences were disclosed in the fit of the curves for Brooklyn, for 1910, for 1 to 5½ miles from the center; Detroit, for 1910, for 1 to 4½ miles; Toronto, for 1914, for 1 to 4½ miles; Toronto, for 1899, for 1 to 3 miles; Ottawa, for 1911, for ⅜ to 1½ miles.

The limits are, respectively, the point of maximum density (which varied from fifty to one hundred persons per acre) and a point where the average density was below ten per acre.

B. POPULATION GROWTH

If the number of communities over 2,500 is assumed for future dates, then the formula for the maximum aggregation can be used

to estimate future populations. It is found that a practically uniform rate of increase accrued during four decades in the number of incorporated places which exceeded 2,500 in population. The past forty-year average rate was computed and projected uniformly into the future. The population of the largest aggregation was computed from the formula already given, and by the application of a ratio determined from past experience the future population of the New York region was estimated. It is given in Table IV, which also includes estimates derived by a system of ratios applied to

TABLE IV

ESTIMATED POPULATION OF THE NEW YORK REGION

Date	Population by Method of: Probabilities Applied to Total Number of Communities over 2,500	Ratios to Total United States Population
1930	9,700,000	9,670,000
1940	11,000,000	11,000,000
1950	12,400,000	12,300,000
1960	13,600,000	13,820,000
1970	15,100,000	15,430,000
1980	16,400,000	16,850,000
1990	17,900,000	18,460,000
2000	19,200,000	19,780,000

what is believed to be the maximum probable future population of the United States.

The methodology underlying the application of ratios is as follows:

1. The future probable maximum population of the United States was estimated on the basis of United States Department of Agriculture data as to food production (300,000,000).

2. The future population of the country was estimated for each future census date on the basis of such a uniformly decreasing rate of increase as would produce the assumed ultimate total.

3. The past ratio to the population of the whole country was determined of the total population of all communities, each of which possessed at each census date over 1 per cent of the population of the country.

4. This curve of ratios was projected into the future (an asymptote being clearly indicated).

5. The probable future ratios were applied to the estimated population of the country to find the population of the "over 1 per cent" group.

6. The past ratios of the population of the New York region to the "over 1 per cent" group and this curve of ratios was projected into the future (it had become a constant about 1870).

7. The future ratios were applied to the total for the "over 1 per cent" group to find the future probable population of the New York region. (The results are shown in Table IV.)

This method is applicable to any community, but it must be understood that the possible percentage variations above or below the estimated results may be expected to increase as the size of the community decreases.

C. POPULATION ECONOMICS

Many factors of everyday life have been found to bear a relationship to the populations of communities. The street car "riding habit," the number of persons to each automobile, the number of business establishments required to serve each 1,000 population, the number of industrial wage-earners, the area of industrial land per worker, are factors which largely depend upon economic factors applied to population numbers.

For example, the riding habit on trolleys in cities throughout the country about 1920 averaged in accordance with the formula:

Riding habit = 7.36 times (population exponent 0.31)

Another example as to the relationship which has existed between automobile registration in the whole United States and the population is given by the formula:

Total registration = total population divided by (4.25 plus *e* exponent 1.45-times-the-date-in-question-subtracted-from-1926)

This formula indicates that the saturation point of automobile registration is to be when there is one car for each 4.25 persons.

Since 1850 the number of industrial wage-earners in its relation to total population has been closely approximated by the formula:

> Wage-earners = population divided by [the sum of 0.133 plus (0.134 divided by *e* with an exponent 0.0444-times-the-date-in-question-minus-1840)]

This formula indicates that the percentage of industrial wage-earners will eventually become equal to one divided by 13.3, or 7.5 per cent.

A complicated formula was reported to the late International Garden City and Town Planning Conference which relates the economic average residence-building height to the population of the community.

APPLICATIONS TO CITY PLANNING

These formulas are simply examples of many mathematical relationships which have been disclosed by study. How such data can be employed is illustrated in the few succeeding paragraphs.

If the future size of any community is estimated and the probable distribution of its population within the community is assumed, from such statistical studies as those described above, then it is not difficult to draft a zoning ordinance as far as it relates to building height or bulk—assuming uniform topography.

With population density and distribution known, the "average length of haul" on transit lines can be computed, and with the riding habit known from such a formula as that quoted above the capacity of a proper transit system can be determined.

Formulas for the future number of industrial wage-earners in any region can be derived and, when combined with data as to land

and building area required per worker, will give the areas which must be set aside for industry when zoning a district.

With zone boundaries and conditions established scientifically it is not difficult to devise a street and a transit system capable of handling the expected traffic without congestion. Conversely, when the problem involves the fixation of building bulk and height limits, the population which can be accommodated is fixed and zoning conditions can be adjusted to fit an existing street system.

Such data and application to actual conditions, if carried sufficiently far, will create a science of city planning which should move hand in hand with the art, and the psychological, sociological, and political aspects can and should be similarly analyzed and made to contribute their quota toward a complete solution of the great modern human problem.

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THE RATE OF GROWTH OF CERTAIN CLASSES OF CITIES IN THE UNITED STATES

The three classes of cities comprised in this study are those of 25,000, 100,000, and 500,000 population. The latter class is not represented in the table (Table I) or curves (Fig. 1), since there were too few of such cities for classification.

So far as I know the rate of growth of these classes of cities has not been established and published. The census of 1920 shows that the distribution of our national population by classes of cities and rural districts differs somewhat from that of 1910. But this gives no clue to the rapidity of gain of the various classes, since each class is treated as a whole, irrespective of the number of cities in each class, and since, further, the country is included.

There is a certain practical importance attached to knowing the rate of growth of different classes of cities. As an illustration of this I may refer to my own needs at the present time. I have been asked to discuss the probable future of the population and industry of my own state. This involves a knowledge of the increase of the urban population, among other things. It also involves making an estimate of the growth of particular cities. Any justification for hazarding a guess concerning the future population in general or particular must rest on well-attested rates of growth in the past.

It is conceived that such a line of study might also be of some consequence in the field of city planning for coming cities. In planning for relatively small cities it is always a question as to how extensive the plans should be, whether partial or complete, and in any case what their nature should be. To be able to estimate the probable future growth of the city in question might be of consid-

erable assistance in deciding on the kind and extent of plan it were advisable to advocate.

In the present study I have worked out the rate of increase of each of three classes of cities for the entire period covered and for each decade and for all the cities of all classes for all decades, except that the rate of increase is given in the census of 1920 for all cities having a population of 25,000 or more in 1920 for the last

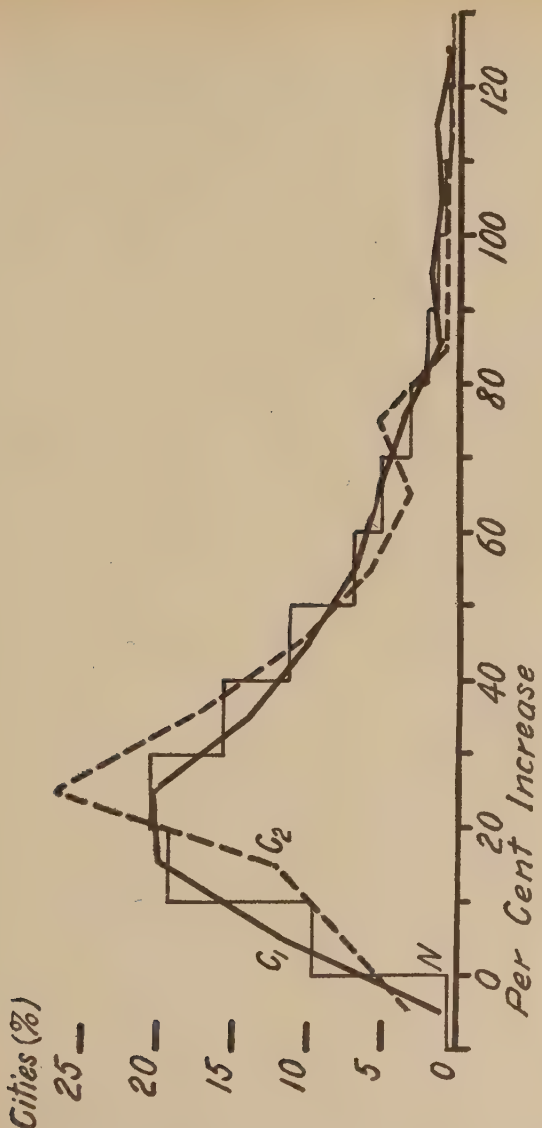
TABLE I

AVERAGE RATES OF INCREASE OF CITIES OF THE UNITED STATES BELONGING TO THE 25,000 AND 100,000 POPULATION CLASS BY DECADES 1850 TO 1920

Decade Ending	25,000 Class				100,000 Class			
	Average		Limited Average		Average		Limited Average	
	No.	Rate	No.	Rate	No.	Rate	No.	Rate
1860	9	73.4	4	33.9	7	108.6	4	28.1
1870	15	30.4	11	33.2	8	67.5	5	36.5
1880	24	37.6	18	33.3	16	47.0	15	44.7
1890	34	43.4	27	35.8	21	46.5	16	42.0
1900	51	27.6	40	35.0	38	30.5	30	33.6
1910	67	36.4	58	32.8	52	41.7	44	32.2
1920	71	33.2	55	32.1	77	28.6	61	29.3
Total	271	40.3	213	33.7	219	52.9	175	35.2
Median	...	28.4	...	....	...	30.0	...	....

two decades. The accompanying table (Table I) presents some of the results. It gives the simple average and also the limited average for the 25,000 and the 100,000 classes for each decade and for the whole period. It also gives the median for each class for the entire period. The class limits of the different classes were: for the 25,000 class, 20,000 to 24,999; for the 100,000 class, 50,000 to 149,499; for the 500,000 class, not represented in the table, they were 400,000 to 599,999. The limits had to be widened in the case of the larger cities in order to supply enough cities for representative purposes.

The decennial simple average rates of increase for the 25,000


Cities (%)
25
20
15
10
5
0
0
20
40
60
80
100
120
Per Cent Increase
G_1
G_2
N

class range from 30 to 73; those of the 100,000 class, from 28.6 to 108.6. The decennial limited average rates were secured by taking the average of all rates of increase from 10 to 74. These range from 32.1 to 35.8 for the 25,000 class of cities, and from 28.1 to 44.7 for the 100,000 class. For the 25,000 class the average of all decades from 1850 to 1920 is 40.3, the limited average is 33.7, and the median is 28.4. For the 100,000 class the average is 52.9, the limited average is 35.2, and the median is 30.0. For the 500,000 class of cities the average is 36.5, the weighted average is 36.1, the limited average is 27.4, and the median is 26.7. It will be a matter of purpose and judgment as to which of these averages should be used, or whether, in the case of an exceptional city, some more direct method of establishing its probable future growth will not be resorted to.

Because of the large number of cities in each of the two classes of cities, 25,000 and 100,000, it was possible to construct tables of percentages based on class ranges of 10. The classes ranged from —20 to —30 to over 200. But there were so few above 130 as to render it not worth while to try to extend the curves beyond that point.

Perhaps the curves (Fig. 1) require a word of explanation. C_1 represents the 25,000 class of cities; C_2, the 100,000 class; and N the normal curve when put on a geometric basis. The logarithmic normal curve has recently been established by my colleague, Professor G. R. Davies, and an account of it will soon appear in the *Journal of Statistics*. It is seen that C_1 corresponds very closely to the normal curve, and that C_2 does so for the most part, though to a less extent.

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POPULATION MOBILITY AND COMMUNITY ORGANIZATION

SOURCES AND METHOD

This paper is written from a portion of the material gathered in a three-year study by the Community Committee of community organization in New York City. The compilation of population figures has been made by Miss Mary Johnston from the census figures of 1920. Six communities in the Borough of Manhattan were selected because they possess well-established community organizations and present clearly some of the effects on the community of a changing, particularly a decreasing, population. Those communities are: (1) Bowling Green, at the southern tip of lower Manhattan, west of Broadway, with 10,654 inhabitants; (2) Greenwich, extending along the Hudson from Canal Street to Fourteenth Street, with 101,592 people; (3) Clinton, west of Fifth Avenue from Fortieth to Fifty-ninth streets, of 99,170 population; and on the eastern strip of the island (4) the Lower East Side, from the Battery nearly to Houston Street, numbering 340,949 persons; (5) Kips Bay, east of Fifth Avenue from Twenty-eighth to Fifty-ninth Street, with 105,744 people, and (6) Yorkville, east of Fifth Avenue from Fifty-ninth to Ninety-sixth Street, having a population of 285,773. Organizers of projects affecting each of these communities as a whole, at the head of non-sectarian and non-political organizations, each of whom has been active for more than ten years in his district, as well as social workers and school officers, have been the source of opinions in this paper concerning results in community organization due to population changes. Access has been had to other studies, notably a careful one made by the Jewish Welfare Board, of changes on the Lower East Side.

POPULATION MOBILITY IN THE SIX DISTRICTS

1. Bowling Green, on the Lower West Side, decreased in population, from 1910 to 1920, 24 per cent. Most of this has been a decrease in the foreign white population from 53.2 per cent to 46.2 per cent. Native whites of native parentage increased from 10.6 per cent to 11.2 per cent of the district's total. In the sanitary districts in the lowest or southernmost section of the district the Irish, Turks, Italians, and Germans decreased 1,259, and the Austrians and Greeks increased 548. For Bowling Green, Irish, Germans, and the Turks are the older population, moving north and out of the district, while the Austrian, Greek, and Roumanian newcomers take their places.

2. Greenwich, just to the north, decreased less, or 17 per cent in population, native whites of native parentage increasing in proportion and the foreign whites decreasing 26 per cent. The Turks and Russians, decreasing in Bowling Green, are increasing in Greenwich, and the Greeks are increasing. Irish and Germans are leaving all parts of the district. Italians left the Italian colonies uniformly but decreased and increased unevenly in other sanitary districts. Again only three nationalities showed increases in numbers.

3. In Clinton, still to the north, the population decrease is still smaller (6 per cent), and the number of nationalities increasing is 9. There was an increase both in the number and proportion of the native whites of native parentage. The Irish and Germans left in large numbers and the Italians came into the district. The Irish and German decrease in percentages was greater in the tier farthest from the river, where business pushed hardest and the Italians came in fewest numbers. From the middle or residential tier Irish and Americans left in smallest percentages and Italians came in largest. Here business shoved people out and newer immigration displaced the old.

4. In the Lower East Side (again starting at the southernmost tip of Manhattan), there is a decrease of 25.3 per cent in total population and an increase not only in the proportion but also in the actual number of native whites with one or both parents foreign, showing the effect of dropping-off of immigration. Decreases included 46 per cent among the Russians, 36 per cent among the Austrians (pre-war groupings), 20 per cent among the Italians, 46 per cent among the Irish, and 61 per cent among the Germans. There were increases in only three nationalities: Greeks, Turks, and Canadians.

5. Kips Bay, on the middle east side, decreased in population only 4.8 per cent and showed an increase in proportion and number of native whites of native parentage, a decrease in the proportion and number of foreign-born whites. The greatest decrease was among the Irish (21 per cent) in the district from First to Third avenues and from Twenty-ninth to Forty-ninth Street. Into this district came the Greeks in largest numbers and also Italians. The Germans left from all parts of Kips Bay. There were seven nationalities that increased in numbers.

6. Still north of Kips Bay, Yorkville decreased only 1.5 per cent, and thirteen nationalities increased in numbers. Again native whites of native parentage increased in number and proportion. The Germans left from all sections of the district. The Irish decreased 4 per cent but they moved around in the district to their own advantage, leaving the less desirable territory east of Third Avenue. The Italians are coming in from the river to Third Avenue.

GENERAL TRENDS

The movement is universally northward and the native whites are increasing in proportion and, in the northernmost communities studied, in actual numbers, despite a population decrease. The Germans and Irish are leaving all these communities, but the Irish

shift themselves into advantageous parts, while the Germans march out more evenly from all districts. The newer immigration, especially Italian, Austrian, Greek, and Russian, step into the sanitary districts vacated by the old. The lower part of Manhattan is a receiving station for immigration, and comparatively few nationalities come at a time (three in Bowling Green and Lower East Side), but as we move north there are more nationalities increasing in number.

EFFECTS ON COMMUNITY ORGANIZATION

Universally organizers maintain that the successful of all nationalities are moving out of the neighborhoods. Usually it is the young folks who have made some money, can pay on a house, and who, with the help of the other money-earning children, can take the old folks and keep up the payments. They move for one main cause—to get better housing and to live in better neighborhoods. Practically no stimulation for the movement of an organized or deliberative kind can be found. The movement is toward Queens from every district, less to the Bronx, and still less to Brooklyn and Jersey.

It is a real movement, a general exodus, and has taken on large proportions in the last three years. Families that have been rooted for thirty years are moving from every one of these districts. The organizers report that the flow is toward the building operations. These people are coming back to clubs, churches, and social groups in their old neighborhoods, but they come less often than when they lived in the district. Henry Street Settlement has found it necessary to change the character of its club work in consequence. Hartley House, in Clinton, is changing deliberately the character of its work from service in clubs to boys and girls to one of providing facilities for new nationality groups.

In all districts but Bowling Green schools are losing in attendance and therefore in number of teachers. The good teachers see

the handwriting on the wall and can get jobs most quickly, and the principals complain of the loss of the efficiency and morale built up in the teaching staff over a period of years. The spirit and methods of a school adjust to one nationality only by the time another comes along and necessitates further change.

Churches are "digging in," and even where their clientéle moves they are usually succeeding in organization plans. One German church lost many members, other members moved, until a small congregation scattered over the Greater City owned the property. It was sold at twenty times the original cost, and the small, scattered, but financially well-knit congregation moved four blocks to a new site which a real estate man says will be worth three times its cost in six months. Primary controls are often lost.

Business—button, jewelry, and other small factories—is shoving people out of the Lower East Side, less than the desire to better living conditions, but quite surely. Theatrical business is rapidly crowding Clinton. A police captain estimated his precinct at 100,000 residents and 1,000,000 floating population, largely theatrical people. The civic and social organizers say the actors won't help in anything local with time, money, or talent. In local affairs the residents are losing the old confidence based on support of neighbors. Garages are making increases in the four upper communities. The neighbors call them dangerous and undesirable. Apartments and apartment hotels are supplanting two-family houses in Kips Bay and are bringing some people of better means to the neighborhood, but schools, churches, and civic workers maintain they give no appreciable help since they have interests outside their new neighborhood.

Population is changing in New York City as rapidly today as ever before, and in a more complex manner. The Lower East Side, once the congested section, is now one of the few districts where

there is no part time in the schools. One school, ten years ago 99 per cent Jewish, is now 99 per cent Italian.

With the insistence on housing the factor of deliberate community planning is apparently increasingly important. Interestingly, no evidence whatever was revealed of racial superiorities in the matter of standards of living. Each organizer insists every nationality moves out and on to better housing and better neighborhoods as soon as there is any economic possibility.

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MALADJUSTMENT OF YOUTH IN RELATION TO DENSITY OF POPULATION

Attention is repeatedly called to the apparent increase in the social maladjustment of young people. Whether there is any actual increase, or whether our changing attitude, along with more accurate and detailed methods of recording conflicts, brings youthful violations of the social codes to our attention, we cannot say. Whatever may be the case, the expenditure of energy by any considerable part of the population in ways which are harmful to the group is social waste and should be reduced to a minimum.

This report is based largely upon data which we are gathering in making a study of factors contributing to juvenile delinquency in the Twin Cities of Minnesota, an urban community of about 900,000 population. In any study of this kind much of the work is of necessity an eliminating process, and it is in regard to one such point that this report is made. A statement that is taken to be almost axiomatic by many writers is that density of population is a cause of crime, or at least associated with the presence of crime, and the less the person knows about it, the more definitely density of population is spoken of as a *cause* of crime. We are compelled to agree with Professor Chaddock that statistics should serve as a guide in making our generalizations in sociology, rather than unproved assertions, even though these may come from persons of authority in some particular field of inquiry. The Twin City study has led to some conclusions with regard to the relation between density of population and juvenile delinquency.

In spite of sweeping statements often made that "Society is being disorganized and juvenile delinquency is becoming rampant," the maladjustment of youth is not as general as some conclude.

1. It is rather definitely localized within circumscribed areas which Burgess called "the zone of transition."

2. Within these "maladjusted" areas there is not necessarily any density of dwellers. In fact the density of population is relatively lower than in other areas where there is little, or practically no, delinquency.

3. There is no undue density of particular age groups.

4. There is not any high correlation with overcrowding in homes.

5. These areas do have many persons "passing through," who come there because of the business or light industry adjacent.

6. There is a high percentage of mobile population, such as temporary boarders and roomers, unsettled families, persons moving up the social scale, and persons moving down the social scale, all of whom come into secondary contact with the young people of the area, but do not form a united attitude or have any definite group mores regarding the details of life of the young people in the neighborhood.

Social mores are determined by the group. Social control is dependent upon the mores. Where there are no group affiliations, no group attachments, no group control, there occurs increased social maladjustment and delinquency as compared with the rest of the community.

I will now briefly summarize the results of our study as they are related to the above six conclusions.

1. The juvenile delinquency area corresponds to the "zones of transition" in Minneapolis and St. Paul. We also find an almost entire absence of agencies working with boys and girls.

2. A common error in comparing density of population is to take the density of an entire ward, or political subdivision, rather than the density of the specific area of delinquency or other factor being studied. Thus undue weight is given to parks or other local factors. We have taken definite small areas for comparison, with

the following results (Locations I and II each represent two areas *equal in size* and practically adjoining each other. We find less delinquencies in the more dense areas):

I. *Area A*—population, 3,200
Juvenile delinquents, 1.09 per hundred of population
Area B—population, 6,800
Juvenile delinquents, 0.01 per hundred of population
II. *Area A*—population, 24,000
Juvenile delinquents, .50 per hundred of population
Area B—population, 30,000
Juvenile delinquents, .02 per hundred of population

In every case, only two of which we have cited here, the above situation held true.

3. According to the school census maps, there is no density of age groups which would be classified as juvenile.

4. Low coefficient of association found with overcrowding. An intensive study was made of all juvenile court cases in one of the areas and it was found that there was no more overcrowding in the homes from which delinquents came than in other homes in the community. The coefficient of association was negligible.[1]

5. Transitional zones. Some of the worst cases of social maladjustment and delinquency may be found in isolated rural communities. It is not density of population which is of great significance in juvenile delinquency, since we find that there is no significant coefficient of association between them, but rather the "transitional zone" area, *where the details of the individual's life do not definitely fit into the established group organizations and activities;* where the details of the *individual's* life are lost in the *group activities*, the nature of which is unknown to other members of his primary group.

[1] The maps, charts, and data upon which this is based, along with further results of this investigation, are being published in bulletin form.

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University of Minnesota

IV

ECOLOGY OF THE CITY

THE SCOPE OF HUMAN ECOLOGY

In the struggle for existence in human groups social organization accommodates itself to the spatial and sustenance relationships existing among the occupants of any geographical area. All the more fixed aspects of human habitation, the buildings, roads, and centers of association, tend to become spatially distributed in accordance with forces operating in a particular area at a particular level of culture. In society physical structure and cultural characteristics are parts of one complex.

The spatial and sustenance relations in which human beings are organized are ever in process of change in response to the operation of a complex of environmental and cultural forces. It is the task of the human ecologist to study these processes of change in order to ascertain their principles of operation and the nature of the forces producing them.

It is perhaps necessary at the outset to indicate the relation of human ecology to the kindred sciences of geography and economics. It has been claimed that geography is human ecology.[1] There are doubtless many points in common between the two disciplines; but geography is concerned with place; ecology, with process. Location, as a geographical concept, signifies position on the earth's surface; location as an ecological concept signifies position in a spatial grouping of interacting human beings or of interrelated human institutions.

Research in economics and commercial geography on land value,[2] marketing, transportation, commerce, factory and business

[1] H. H. Barrows, "Geography as Human Ecology," *Annals of the Association of American Geographers,* XIII (March 1923), 1–14.

[2] Note such studies as R. M. Hurd, *Principles of City Land Values* (1905); C. C. Evers, *Commercial Problems in Buildings* (1914); E. M. Fisher, *The Principles of*

location frequently has ecological significance. The difference between economics and ecology lies mainly in the direction of attention. Business economics, the division of economics having most ecological significance, is usually approached from the point of view of the business man who may want to know the best place to locate a factory or the best method of marketing a commodity. The ecologist studies the same economic problems, but in relation to the processes of human distribution. The chain-store system of marketing goods, for instance, might be studied by the economist as a system of retail marketing, whereas the ecologist might study it as an index of the process of decentralization.[3]

Ecological distribution.—By this term is meant the spatial distribution of human beings and human activities resulting from the interplay of forces which effect a more or less conscious, or at any rate dynamic and vital, relationship among the units comprising the aggregation. An ecological distribution should be distinguished from a fortuitous or accidental distribution, where spatial relationships are, or seem to be, largely a matter of chance rather than the resultant of competing forces. For example, the aggregation of people waiting for the door of a theater to open represents a fortuitous spatial distribution; but their distribution in the theater, according to the kind of tickets they present, is a temporary ecological distribution. Although less complex and exacting, this distribution is quite similar to that which takes place in the community at large under conditions of free competition and choice.

The spatial distribution of economic utilities, shops, factories, offices, is the product of the operation of ecological forces quite as

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Real-Estate Practice (1923); Ely and Morehouse, *Elements of Land Economics* (1924); F. S. Babcock, *The Appraisal of Real Estate* (1924).

[3] Such a study is being made by E. H. Shideler, "The Retail Business Organization as an Index of Community Organization" (in manuscript).

much as is the distribution of residence. The business man who attempts to locate his factory or place of business with scientific exactness seeks the position of maximum advantage: that is, he seeks a point of equilibrium among competing forces. For this reason the value of location is always relative, and changes as one or more of the co-operating forces gain or lose in relative significance. A community, then, is an ecological distribution of people and services in which the spatial location of each unit is determined by its relation to all other units. A network of interrelated communities is likewise an ecological distribution. In fact, civilization, with its vast galaxy of communities, each of which is more or less dependent upon some or all of the others, may be thought of as an ecological distribution or organization.[4]

Ecological unit.—Any ecological distribution—whether of residences, shops, offices, or industrial plants—which has a unitary character sufficient to differentiate it from surrounding distributions may be defined as an ecological unit. On the other hand, an interdependent grouping of ecological units around a common center may be called an "ecological constellation." The metropolitan area, with its various districts of residence, business, and industry integrated about a common center usually called the city is an ecological constellation. Such groupings may vary in degree of ecological interdependence from the connurbations which are found in each of the strategic areas of commerce and industry to the larger national or international communal federations linked financially and industrially with a metropolitan center such as London or New York.

Mobility and fluidity.—An ecological organization is in process of constant change, the rate depending upon the dynamics of cultural, and particularly technical, advance. Mobility is a meas-

[4] Ecological distribution, as here used, is synonymous with ecological organization.

ure of this rate of change; it is represented in change of residence, change of employment, or change of location of any utility or service. Mobility must be distinguished from fluidity, which represents movement without change of ecological position. Modern means of transportation and communication have greatly increased the fluidity of both people and commodities. Increased fluidity, however, does not necessarily imply increased mobility. In fact, it frequently produces the opposite effect by making residence relatively independent of the place of work; also by extending the territorial zone in which the individual may seek the satisfaction of his wishes.

Fluidity tends to vary inversely with mobility. Slums are the most mobile but least fluid sections of a city. Their inhabitants come and go in continuous succession, but, while domiciled within a given area, have a smaller range of movement than the residents of any of the higher economic districts. The unequal fluidity of different districts of the city and of different individuals within the same district is an important factor in the processes of segregation and centralization. Youth tends to be more fluid than old age or childhood, giving rise to characteristically different centers of interest and varying regions of experience for each age group.

Distance.—Ecological distance is a measure of fluidity. It is a time-cost concept rather than a unit of space. It is measured by minutes and cents rather than by yards and miles. By time-cost measurement the distance from *A* to *B* may be farther than from *B* to *A*, provided *B* is upgrade from *A*.

Communal growth and structure are largely functions of ecological distance as a time-cost concept.[5] This basis of distance determines the currents of travel and traffic, which in turn determine the areas of concentration and the locations of cities. Likewise, communal structure is a response to distance in the local movements of commodities and people. The uneven expansion of cities

[5] See *Plans of New York and Environs,* maps and diagrams, p. 27.

along the routes of rapid and cheap transportation is but an obvious result of the time-cost measurement of distance. American cities, unlike European cities, are seldom circular in shape, owing to the fact that they have usually grown up without systematic planning, and therefore their intramural transportation is frequently less uniformly developed than is the case in most European cities. American cities—and this is particularly true since the advent of the automobile—tend to spread out in starlike fashion along the lines of rapid communication. The maximum linear distance from the periphery to the center of the city is seldom over an hour's travel by the prevailing form of transportation.

Ecological factors.—The changing spatial relations of human beings are the result of the interplay of a number of different forces, some of which have general significance throughout the entire cultural area in which they operate; others have limited reference, applying merely to a specific region or location. For instance, the shaft elevator, introduced in the seventies, and steel construction, introduced in the nineties, and the more recent advent of the automobile have acted as general factors in affecting the concentration of population and organization of communities. On the other hand, geographic factors, such as rivers, hills, lakes, and swamps, may have either general or limited significance with regard to ecological distribution, depending upon the peculiarities of local conditions. Certain factors, such as bridges, public buildings, cemeteries, parks, and other institutions or forces have only limited significance in attracting or repelling population.

Ecological factors may be classified under four general heads: (1) geographical, which includes climatic, topographic, and resource conditions; (2) economic, which comprises a wide range and variety of phenomena such as the nature and organization of local industries, occupational distribution, and standard of living of the population; (3) cultural and technical, which include, in

addition to the prevailing condition of the arts, the moral attitudes and taboos that are effective in the distribution of population and services; (4) political and administrative measures, such as tariff, taxation, immigration laws, and rules governing public utilities.

Ecological factors are either positive or negative; they either attract or repel. It is part of the task of the ecologist to measure the dispersive and integrative influence of typical communal institutions upon different elements of the population. Such knowledge would be of great value in city-planning, as it would enable the community to control the direction of its growth and structure. Effort must always be made to isolate the determining or limiting factors in a specific ecological situation.

Ecological processes.—By ecological process is meant the tendency in time toward special forms of spatial and sustenance groupings of the units comprising an ecological distribution. There are five major ecological processes: concentration, centralization, segregation, invasion, succession. Each of these has an opposite or negative aspect, and each includes one or more subsidiary processes.

Regional concentration.—This is the tendency of an increasing number of persons to settle in a given area or region. Density is a measure of population concentration in a given area at a given time. World-population density maps indicate in a general way the significance of geographical factors in the distribution of human beings. While formerly the limits of concentration were defined by the conditions of local food supply, modern industrialism has created new regions of concentration, the limits of which are defined not by the local food supply but by the strategic significance of location with reference to commerce and industry.

The townward tendency is operating in every civilized country. "As in other countries so in Japan the dominant characteristic of the new industrial-

ism is the trend of population from the country to the city. . . . . In the case of Tokyo, the capital, population during the last twenty-five years has increased from 857,780 to 2,500,000, while Osaka, the greatest industrial center of the Empire, during the same period has grown from 500,000 to over 1,500,000; Nagoya, from 200,000 to 450,000, Yokohama has increased fourfold, and Kobe, fivefold. The five greatest industrial centers above mentioned have thus increased 325 per cent, or 300 per cent more than the nation as a whole. . . . . Great areas which ten years ago were taken up with rice fields or marshes are now reclaimed and covered with factories or labor tenements, and property values at the same time have gone up more than 1,000 per cent. . . . . These cities may be justly taken as focal points to reveal the metamorphosis of Japan from a feudal to an agricultural country, and now to the age of steam, electricity, and steel.[6]

The territorial concentration of population resulting from industrialism and modern forms of transportation and communication is more dynamic and unpredictable[7] than were the older concentrations controlled by factors of the local environment. Modern territorial concentration is never the result of natural population increase alone. It always represents the shifting of population from one territory to another. Practically all food-producing areas of countries which have come under the influence of modern machine industry have decreased in population during the last few decades.[8]

The limits of regional concentration of population in a world-economy of large-scale industry are determined by the relative

[6] *Present-Day Impressions of Japan* (1919), p. 539.

[7] The census bureau has not recently published estimates of population increase for such dynamic cities as Los Angeles, Detroit, Seattle.

[8] None of our leading food-producing states during the decade 1910–20 showed a percentage increase in population equal to the increase for the country as a whole.

A recent study shows that three-fourths of Iowa's counties had from 20 to 30 per cent fewer people living on farms in 1920 than in 1885. Moreover, the farm population for the state as a whole decreased from 1,160,000 to 980,000 in this period, while the town and city population jumped from 600,000 to 1,420,000 (*Wallaces' Farmer,*) March 29.

competitive strength which the particular region possesses over other regions in the production and distribution of commodities. The degree of concentration attained by any locality is therefore a measure of its resource and location advantages as compared with those of its competitors. This strength is shown in the struggle for *hinterland*, raw materials, and markets, and depends upon the conditions of transportation and communication.[9]

Regional specialization.—Regional specialization in production is the natural outcome of competition under prevailing conditions of transportation and communication. Territorial specialization has two points of special significance for the human ecologist. In the first place it produces an economic interdependence between different regions and communities which changes the sustenance relations not only of the individuals within the community but also of the different communities to one another. In the second place it makes for regional selection of population by age, sex, race, and nationality in conformity with the occupational requirements of the particular form of specialized production.

Dispersion.—The obverse of concentration is dispersion. Concentration in one region usually implies dispersion in another. Steam transportation, by increasing the fluidity of commodities, ushered in a new epoch in regional concentration; motor and electric transportation, by increasing the fluidity of people, is now producing a new era in dispersion. Whatever retards the movement of commodities limits concentration, and whatever facilitates the

[9] The literature of economic geography is largely devoted to discussion of the factors determining strategic points of commerce and industry.

[10] Few American cities at the present time have normal age and sex distribution of the population. The percentage of persons in the age group fifteen to forty-five is usually much higher for cities than for rural districts or for the country as a whole. Furthermore, industrial specialization tends to create single-sex cities. Textile cities such as Lowell, Paterson, New Bedford, have a predominance of women, while heavy-industry cities, such as Pittsburgh, Akron, Seattle, have a predominance of men.

movement of people makes for dispersion. The forces at work during the past few years have been favorable to dispersion. High freight-rates, high taxes, and labor costs are forcing many industries to disperse or relocate. On the other hand, the automobile and rapid-transit lines are permitting the concentrated urban populations to spread out over adjacent territory.

Centralization.—Centralization as an ecological process should be distinguished from concentration, which is mere regional aggregation. Centralization is an effect of the tendency of human beings to come together at definite locations for the satisfaction of specific common interests, such as work, play, business, education. The satisfaction of each specific interest may be found in a different region. Centralization, therefore, is a temporary form of concentration, an alternate operation of centripetal and centrifugal forces. Centralization implies an area of participation with center and circumference. It is the process of community formation. The fact that people come together at specific locations for the satisfaction of common interests affords a territorial basis for group consciousness and social control. Every communal unit, the village, town, city, and metropolis, is a function of the process of centralization.

The focal point of centralization in the modern community is the retail shopping center. The market place, at which buyers and sellers meet, has always had a potent centralizing or community-making significance. Since economic contacts are more abstract and impersonal than other kinds of contacts, the trade center has more general attractive significance, and therefore more community-making influence, than the school, the church, the theater, or any other type of interest center. It is retail shopping that creates the "Main Street" of the little town and the city of the metropolitan community.

The distance from the center to the periphery of any unit of centralization depends upon the degree of specialization which the

center has attained and on the conditions of transportation and communication. In regions or districts where human energy is the chief motor power the units of centralization are seldom more than a few miles in radius, as is illustrated by the village communities of the Orient. In the agricultural town of America, prior to the advent of the automobile, Warren H. Wilson found that the "team-haul"[11] (the distance that a team could travel to the center and return on the same day) defined the outer limits of the trade area.

Focal points of centralization are invariably in competition with other points for the attention and patronage of the inhabitants of the surrounding area. Thus the present conditions of centralization always represent but a temporary stage of unstable equilibrium within a zone of competing centers. The degree of centralization at any particular center is, therefore, a measure of its relative drawing-power under existing cultural and economic conditions. The introduction of a new form of transportation, such as the automobile, completely disturbs the ecological equilibrium and makes for a reaccommodation on a new scale of distance.

Centralization under any given conditions of transit and concentration takes place in cumulative fashion, increasing with its own momentum until it reaches the point of equilibrium or saturation. Then, unless relief is afforded by the introduction of new avenues of transit, a retrograde movement commences, giving rise to new units of centralization or new developments of old units. In this way new communities are born within the metropolitan area.

Centralization may take place in two ways: first, by an addition to the number and variety of interests at a common location, as, for instance, when the rural trade center becomes also the locus of the school, church, post-office, and dance hall; second, by an increase in the number of persons finding satisfaction of a single interest at the same location.

[11] *The American Town.*

Specialization and centralization.—As the regional concentration and fluidity of the population increases, territorial specialization of interest satisfaction follows. The urban area becomes studded with centers of various sizes and degrees of specialization, which is a magnet drawing to itself the appropriate age, sex, cultural, and economic groups. Time specialization takes place as well as place specialization. At different hours of the day and night the waves of selective centralization ebb and flow. As a New York bohemian facetiously remarked, the commuter's train carries to the city in the early morning the workers, an hour or so later the clerkers, and about midday the shirkers. A similar cycle is repeated by the night population of amusement-seekers.

Types of centers.—Communal points of centralization may be classified according to (1) size and importance as indicated by land values and concentration; (2) the dominant interest producing the centralization, such as work, business, amusement; (3) the distance or area of the zone of participation.

Every community has its main center called the main street, the town, or the city, which is a constellation of specialized centers. The larger the community, the more specialized are the divisions of its center and the wider the zone of patronage. Civilization is a product of centralization. The evolution of economic organization from village and town to metropolitan economy is but the extension and specialization of centralization of each of the dominant interests of life.[12]

Location and movement of centers.—Centralization is a function of transportation and communication. Centers are located where lines of traffic meet or intersect, and vary in importance, other things equal, with the number and variety of converging lines of transit. The "city" is the point of convergence of all the main

[12] See N. S. B. Gras, *An Introduction to Economic History.*

avenues of transportation and communication, both local and intercommunal.

Most centers are responsive to the trends of distribution and segregation of the local population. The main retail shopping center, which is usually the point of highest land value, tends to move in the direction of the higher economic residential areas, but is held fairly close to the median center of population within the zone of participation.[13] Local business centers are more mobile, they respond quite accurately to local trends of segregation and fluidity. Financial centers are less responsive to the currents of travel. Being centers of wide participation, they tend to become of great physical value, and therefore acquire great stability.[14] Work centers are controlled by forces which frequently transcend the bounds of community; those of the basic manufacturing type tend to move out to the fringe of the community, thus making for decentralization.

Leisure-time centers, not associated with trade centers, are comparatively unstable, as is indicated by the dynamic changes in land values.[15] Conditions of concentration and fluidity become determining factors in their distribution. The motion-picture theater, operating on the chain-store principle, is causing new centers to be established far from the downtown center, and new white-light areas are arising in different sections of the city.[16]

[13] The point of highest land value in the business center of Seattle has moved during the last fifty years in the same direction and at the same rate as the median center of population.

[14] Note the location and great stability of Wall Street.

[15] See Felix Isman, *Real Estate* (1924).

[16] This is well illustrated by the present tendency in Chicago. During the last few months three motion-picture theaters of the "superdreadnaught" type have been erected far out from the loop at pivotal intersections of transportation. Each represents an expenditure of from two and one half to three million dollars and has a seating capacity of about five thousand.

Decentralization and recentralization.—These are but phases of the centralization process. New units of centralization are constantly appearing and established units constantly changing in significance.[17] By decentralization is meant the tendency for zone areas of centralization to decrease in size, which of course implies a multiplication of centers, each of relatively less importance. In this sense decentralization is taking place in all metropolitan areas with reference to some interests, while at the same time more extreme centralization is occurring in connection with other interests. In studying the process of centralization, therefore, it is important to find what particular aspects of life are being organized on the basis of smaller centers, what on the larger centers, and what seem to be the factors involved.

General observation leads one to believe that the centralization of any interest varies directly with the element of choice involved in the satisfaction of the interest. Standardization of commodities, both in quality and in price, minimizes the element of choice, with the result that all primary standardized services, such as grocery stores, drug stores, soft-drink parlors, are very widely distributed. On the other hand, the more specialized services tend to become more and more highly centralized.[18]

Segregation.—Segregation is used here with reference to the concentration of population types within a community. Every area of segregation is the result of the operation of a combination of forces of selection. There is usually, however, one attribute of selection that is more dominant than the others, and which becomes

[17] Note John T. Faris, *The Romance of Forgotten Towns* (1925).

[18] A study of the shopping habits of about two thousand families of a middle-class residential district in Seattle showed that about 90 per cent bought their groceries in the neighborhood; 70 per cent, their drugs; 50 per cent, their hardware; and a smaller percentage, their furniture and clothes. In leisure-time activities, a much higher percentage attended local, rather than downtown, churches, but the opposite was true of the attendance at the moving-picture theater.

the determining factor of the particular segregation. Economic segregation is the most primary and general form. It results from economic competition and determines the basic units of the ecological distribution. Other attributes of segregation, such as language, race, or culture, function within the spheres of appropriate economic levels.

Economic segregation decreases in degree of homogeneity as we ascend the economic scale; the lower the economic level of an area, the more uniform the economic status of the inhabitants, because the narrower the range of choice. But as we ascend the economic scale each level affords wider choice, and therefore more cultural homogeneity.

The slum is the area of minimum choice. It is the product of compulsion rather than design. The slum, therefore, represents a homogeneous collection as far as economic competency is concerned, but a most heterogeneous aggregation in all other respects. Being an area of minimum choice, the slum serves as the reservoir for the economic wastes of the city. It also becomes the hiding-place for many services which are forbidden by the mores but which cater to the wishes of residents scattered throughout the community.

Invasion.—Invasion is a process of group displacement; it implies the encroachment of one area of segregation upon another, usually an adjoining, area. The term "invasion," in the historic sense, implies the displacement of a higher by a lower cultural group. While this is perhaps the more common process in the local community, it is not, however, the only form of invasion. Frequently a higher economic group drives out the lower-income inhabitants, thus enacting a new cycle of the succession.

Invasion should be distinguished from atomatization; the latter is a consequence of individual displacement without consciousness of displacement or change in cultural level.

Succession.—In human and plant communities change seems to take place in cyclic fashion. Regions within a city pass through different stages of use and occupancy in a regularity of manner which may eventually be predictable and expressible in mathematical terms. The process of obsolescence and physical deterioration of buildings makes for a change in type of occupancy which operates in a downward tendency in rentals, selecting lower and lower income levels of population, until a new cycle is commenced, either by a complete change in use of the territory, such as a change from residence to business, or by a new development of the old use, the change, say, from an apartment to a hotel form of dwelling.

The thing that characterizes a succession is a complete change in population type between the first and last stages, or a complete change in use. While there is not the intimate connection between the different stages in a human succession that is found between the stages in a plant succession, nevertheless there is an economic continuity which makes the cycles in a human succession quite as pronounced and as inevitable as those in the plant succession. Real-estate investigators are beginning to plot the stages in use succession by mathematical formulas.

The entire community may pass through a series of successions, due to mutations of its economic base affecting its relative importance in the larger ecological constellation. The population type usually changes with the changing of the economic base, as, for instance, when an agricultural community changes to a mining or a manufacturing community.

Structure.—Ecological processes always operate within a more or less rigid structural base. The relative spatial fixity of the road and the establishment furnishes the base in which the ecological processes function. The fact that the movements of men and commodities follow narrow channels of rather fixed spatial significance

gives a structural foundation to human spatial relations which is absent in the case of plant and animal communities.

The history of civilization shows a gradually increasing flexibility of the structural skeleton in which ecological processes operate. Prior to the advent of the railroad the movements of people and commodities were largely controlled by the course of the water systems: river, lakes, and seas. The coming of the railroads in the early part of the nineteenth century marked the first great release with regard to population distribution. New regions of concentration immediately arose, while old regions either declined or commenced a new cycle of growth. The advent of motor transportation and the good-roads movement affords a freedom to human distribution which is unique in history, making for a redistribution of people and institutions on a much more flexible base than was ever known before.

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THE RISE OF THE METROPOLITAN COMMUNITY

Economic history is in part the story of social adjustment. Individuals and families form groups for the production of goods and services. The nature of the productive group changes from time to time in accordance with general conditions inside the group and in the world at large. No simple formula can comprehend the whole situation. A partial expression of the changes is to be found in economic adjustments to meet biological needs. In other words, population tends to outrun subsistence under the currently prevailing modes of production. Accordingly, new economic organizations arise, new habits of life, and new modes of thinking. As one looks over the changing forms he is struck with the fact that, generally speaking, they involve a continuous subdivision and specialization of employment, together with an increasing dependence on one's fellows in the group. In other words, there arises a greater freedom of choice of occupations for the individual; but once the choice is made, freedom vanishes before the greater dependence on other workers. This might be regarded as a law of social progress, if we were inclined to magnify it to the position of a law.

In obedience to the force already indicated there have arisen five forms of general economic organization. These are collectional economy, cultural nomadic economy, settled village economy, town economy, and now, in modern times, metropolitan economy. Under one term or another, according to emphasis on this or that peculiarity, the first four types have been accepted, though not without challenge, as general stages in human genesis. Commonly after the town stage, however, has been put national economy, as the fifth and final stage.

The town, under town economy, was at once the center of an

economic organization and an agency of economic regulation. When town economy weakened and finally disappeared its dual function was found to be divided, the rôle of economic organizer going to the economic metropolis and the function of regulation to the political body, in the classical period, the empire, and in modern times, the national state. It is noteworthy at this point that one of the outstanding differences between the ancient and the modern periods is that, while the ancient period had no metropolis to put in the place of the town on the side of actual economic organization, the modern period has had just that, and more: it also has a national state instead of an empire of force.

The wide national state, such as England or France, was the sheltering fold within which the economic metropolis could work its way. The United States of America, because of its size, wealth, and lack of medieval tradition, has been the most fertile spot, at least up to date, for metropolitan development. The most favorably located town has grown into a great commercial nexus wherein goods and services are exchanged on an unprecedentedly large scale.

The new metropolitan economy was based upon an internal organization of productive forces and an external relationship with other units either of the same order or of more primitive form. Internally the new unit was made up of a great commercial city as nucleus and a large surrounding area as *hinterland*. In the nucleus were the men of big business who looked out upon the *hinterland* as their field of conquest. In the big surrounding area of the unit were the towns and the farms, the railroads and the mines, the canals and the forests. Never before were so many millions of men brought into so big a unit of producers and consumers. Since the sixteenth century this has been the outstanding event in economic history, of which all else, however important, is but an episode or a phase of the larger whole.

But the metropolitan unit of nucleus and *hinterland,* such as Boston and New England, the Twin Cities and the Northwest, did not stand alone and isolated. The dependence of center and area might be great, but it did not preclude a further dependence on other metropolitan units or on distant-town economic units, where the latter still existed. Indeed, one of the chief functions of the great commercial center was to establish and maintain connections with the rest of the world. In that center were the business houses which trade with parts both at home and abroad on behalf of the people, whether residing in the center itself or in the *hinterland*. Living in a New Hampshire town, I would get English wares through Boston. Living in a North Dakota village, I would procure Italian olive oil or Philadelphia shoes through the Twin Cities. I could order direct in some cases, but it would not pay me.

The concentration of economic resources in large metropolitan centers has brought about the most effective utilization of resources, human and material, yet known to society. Never has so much resulted from so little effort. Never have labor, capital, and management been so effective. In the *hinterland* one district may specialize in mining; another, in lumbering; and a third, in agriculture. Some cultivators may produce cereals; and others, dairy products. Small people may keep bees or chickens, or grow fruit or vegetables. But their products, in whole or in part, are destined for the metropolitan market, either for use within the metropolis or for distribution elsewhere.

There, in the metropolitan center, are the specializing agencies which manage the exchange of the whole group. Retailers, of course, operate there, but much more characteristically the wholesalers who gather the products of agriculture and industry for distribution among retailers. The common carriers have their headquarters in the metropolitan nucleus, as also the railroads, the steamship lines, the motor-bus companies, and the express com-

panies. Cold-storage plants, warehouses, and elevators are largest and most numerous in the big centers. And, in a very real sense above all these, are the big banks, trust companies, and insurance companies.

The economies of the large business, though not without limit, are very great. The simple fact is that society can get most out of concentration. And concentration in large businesses is impossible without concentration in large centers. In the merchandising, storage, and transportation of goods, in the accumulation and distribution of labor, and in the amassing and using of capital and credit the big center has an advantage over any alternative arrangement. The least will go the farthest. To the metropolis it matters little whether combines form or decay, whether associations are established or torn asunder; the large-scale business that succeeds must be on a metropolitan basis. That business may, indeed, transcend the single metropolitan unit in one state or in many. The physical basis and the economic advantages remain the same.

I can think of no better analogy than the web of the common spider. This efficient builder establishes first his radial lines running out in all directions from the center. Then the concentric fasteners are put in. At last the spider, posted at the center, is ready to do business. He is about equally distant from all parts. He can go in any direction. For the amount of silk spun he gets the largest possible income.

No rival league of towns, the Hanseatic or any other, could compete with the modern metropolis. Such towns fall into positions of dependence. They may be important as collecting centers of raw materials and distributing centers of supplies, but they are subordinate. They may be commercial, industrial, or financial satellites, but they shine with a borrowed light.

Into the making of metropolitan economic units have gone the efforts of generations of business men seeking to increase their in-

come. By a process of trial and error, without any far-sighted plan, they have reached out, disastrously here and successfully there. Those persons who succeeded made a fortune. If they wrought in the most favorable center they prospered well. And those who bought real estate and improved it prospered with them. In this way private ambition has served public needs.

A metropolitan community arises only where conditions are favorable. Natural resources must be considerable: in the early days, foodstuffs and textile fibers; in the recent period, coal and iron. Lacking these, such a city as Denver can hardly ever aspire to metropolitan proportions. It is, of course, a question whether human ingenuity and industry can take the place of rich deposits of metals and fuel. The Chinese may have to build their chief hopes upon their labor, which in some parts, at least, seem rather vain. Transportation facilities are, of course, also indispensable. The land must be not too rocky for highways and railroads. Nice's ambition to be commercially great meets the barriers of mountains of rock. Where land and navigable water meet, the prospects are greatest. So far there is no full-fledged metropolitan community without a combination of water and land transportation. The future, however, may be different when aerial navigation attains a commercial basis. No metropolitan community can arise unless situated at a respectful distance from its neighbors. Providence has no chance, nor has Milwaukee. Baltimore has lost partly because too near to Philadelphia, and Philadelphia has suffered because too near New York. It is not so much a matter of physical crowding as availability of supplies in adjoining districts. So far as society has yet developed, it seems to be true that there can be no metropolitan community in tropical parts where the atmosphere is both hot and humid. The handicap is too great, both in the matter of manual labor and managerial effort.

Emphasis has already been put on a wide free-trade area with-

in the national state. So wide has this been in the United States of America, and so numerous have been the great metropolitan centers resulting, that we may some day come to compare this country, not with France or Germany, but with the whole of Europe.

The Canadian boundary line has already acted as a limit to, or at least as a restriction upon, the growth of northern metropolitan centers, as the Mexican line may some day hold back the full maturity of southern centers, if they ever arise. International boundary lines are already too narrowly drawn in Europe. Antwerp is held back and the people of the district suffer because of the restricted area of free trade open to it. The late war led to reactionary economic results in so far as it cut up the Austrian empire and made difficult the growth of large centers. Vienna has been cut off from much of its *hinterland*. Constantinople has been put in a difficult commercial position. Wars of conquest may affect unfavorably the sensibilities of small national groups, but there can be no doubt that the enlargement of the political unit makes for efficiency in economic organization, which in material comforts ultimately redounds to the advantage of all racial and national groups, large and small.

While the early developments in metropolitan organization were unplanned by individuals or governments, the later steps have not been wholly without direction. In recent years the chambers of commerce of cities so far apart as St. Louis in America and Marseilles in France have done not a little to help the development of their regions. In both can be found clever and well-formed men specially charged with the duty of metropolitan advance.

It is not possible to state precisely when metropolitan economy arose. Political metropolitan centers, or great capitals, are of course as ancient as Babylon. And some metropolitan economic centers began early to make headway without getting far. Venice and Florence made a start in the fifteenth century. Paris, and particularly London, got under way in the sixteenth century, and the last

named became the first to attain full proportions. In America progress was rapid in the period of canal, and especially railroad, construction. Generally speaking, we may say that a metropolitan community arises at a favorable conjunction of two circumstances, the economic development of the *hinterland* and the rise of business ability and organization in the center. In old countries it follows town economy. In new lands it may even accompany the development of towns in positions of subordination.

Just as the development of towns in town economy displays steps or phases, so does the growth of metropolitan economy illustrate certain steps which stand out more or less clearly. In the first part of the growth we see the prospective center reach out its tentacles by land and sea to secure supplies and to sell goods. It creates a situation and a feeling of dependence, though its means of exploitation are strictly limited. In short, it begins to organize the market. Then comes the development of manufacturing and transportation. In America these two in many parts grew up hand in hand. And with them, but lagging a bit behind, came the close financial knitting together of the whole area.

As time goes on, where the area is politically unrestricted, as in America, the number of metropolitan units increases. While in England only two are well developed, and in France, at most, four, in America there are almost a dozen. At first New York and the overambitious New Orleans sought to carve out two empires for themselves. The former subordinates of these two centers have now come to curb the one and to supplant the other. Out of their envisaged dominions have been carved economic provinces by Cleveland, Chicago, the Twin Cities, St. Louis, and Kansas City. And where they hardly dared to aspire to sway, San Francisco has established a dynasty, firm but not unchallenged.

Perhaps we shall find that the present general drift is toward more compact metropolitan units with smaller *hinterlands,* with centers containing a larger percentage of the total population, and

with all the parts more closely knitted into a unit of mutual dependence.

At first the whole movement was unconscious. It was a drift rather than a plan. It was not understood even by publicists, and by governments at times not advanced, though in England much was done to help London, both by the corn laws and the navigation acts. But now the nature of marketing, of mutual dependence in goods and services, is coming to be well understood. Planning can begin, indeed has begun, as we have seen.

The significance of this is in part that co-operative associations can, with increasing promise of success, play the part that their patrons of early days dreamed of but knew not how to bring about. At first only private initiative with its watchful eye could make any headway, could feel the need for proper adjustment. But now the world may read, and the farmer or fruit-grower, the small business man as well as the large, may embark on enterprises which look toward the exploitation of a metropolitan market, or even cutting right across the lines where opportunities serve, now here, now there.

It is the curse of progress that with advance goes some drawback. Our metropolitan organization seems only to hasten the progress of pressure on subsistence which offers but two possibilities. One is the development of some more effective organization than any yet known. The other is going backward to town economy, where the Chinese now are and where they seem to stick. Just as town and village alternated for at least three thousand years in Europe, went up and down in a teeter-like motion, so may metropolitan and town economy struggle in doubtful victory, till circumstances favor neither, but another, and as yet unheralded, form of economic exploitation. I have been blamed for not going beyond metropolitan economy. Not modesty, but ignorance, prevents me from doing so.

Metropolitan economy has meant also more human intercourse.

It has tended to level off local distinctions and peculiarities, so that metropolitan slang in speech and style in dress come to pervade a wide area. It has created a means for the spread of disease, social and physical. Metropolitan economy with its rapid intermetropolitan connections has prepared the world for disastrous results from epidemics which advancing science will have difficulty in combatting.

Today the effective political control is national and provincial, or, in America, federal and state. A possible rival system is on another basis: it is international and regional. The state is so connected with prejudice and vanity that its continued usefulness is doubtful. The province is so narrow that it hampers metropolitan regional growth. A new alignment of forces would be a widening international organization based on metropolitan regional units. Unfortunately for such a plan the metropolitan regional unit has been, and remains, informal. It has no constitution, no officials, no boundaries. And yet it has a reality which is being grappled for by widely separated persons and groups. Geographers emphasize it in their work. The study of marketing has isolated the phenomena and traced the history. Students of law have recognized the need of it. Chambers of commerce have planned to further it. Governors of provinces or local states have felt the necessity of getting together, at least for temporary regional consultations. Rivers do not flow for the convenience of provinces. Plant diseases respect no provincial boundaries. Railroads have to run through and across, without regard to administrative lines. But metropolitan grouping, clumsy as any grouping must be, is the smallest now commensurate with real economic situations. Down at the bottom is the metropolitan region. Away above is the expanding international state. These are both dreams, for the present blocked by actual states and real provinces.

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THE DISTRIBUTION OF COMMERCIALIZED VICE IN THE CITY: A SOCIOLOGICAL ANALYSIS

SEGREGRATION AND PERSONAL DISORGANIZATION

The commercialized vice areas of the city represent a natural segregation of individuals on the basis of their interests and attitudes. They attract, on the one hand, persons who seek sexual excitement, and on the other, those who exploit sex as a business or profession. Indeed, the very development of vice areas is dependent upon the conditions making for personal disorganization, since under these circumstances the impulses and desires get released from the socially approved channels and consequently find an outlet in the pattern of vice.

Concerning the more or less temporary population of the vice areas it may be said that to a large extent the patrons of commercialized vice, and to a lesser extent amateur and clandestine prostitutes, fit into the category of dual persons who circulate between two conflicting social worlds, namely, a world of respectability in the residential neighborhoods and a world of disrespectability in the downtown districts. The former offers them a life of shelter and security according to the sanctioned definitions of society; the latter, a life of adventure and romance in the realm of the disapproved. Again, a large quota of the more or less permanent habitués of the commercialized vice areas consists of persons whose demoralization has made them outcasts from respectable society, and also of those individuals who, growing up amid great neglect, have developed a disorderly, wild, unregulated scheme of life which makes them unfit to enter organized society without passing through a rather complete re-education.

THE MORAL AND GEOGRAPHICAL ISOLATION OF VICE

But vice is usually censored by the mores of the community. It is not merely defined as immoral; it is also conceived as pestilential. And its open patrons and entrepeneurs are relegated to a social pariah existence. Vice has, therefore, been forced to hide from the moral order of society in order to flourish.

Because of this moral isolation vice gets spatially separated from wholesome family and neighborhood life in the community. The moral attitudes operate as barriers to isolate geographically this peculiar form of human activity.

Accordingly, commercialized vice has assumed two characteristic locations in the community: one at the center, the other at the circumference. It is well known that the central parts of the city, because of the decaying neighborhoods, have very little resistance to the invasion of vice resorts. Furthermore, commercialized vice on the fringe of the city, lodged at inns, taverns, and roadhouses, meets with practically no opposition, since the *hinterland* of the urban community, due to its sparsely settled condition and its decadent rural culture, is really unorganized.

But the vice resorts are usually prevented from assuming this most central location. In the first place legitimate business such as large retail stores, financial establishments, sky-scraper office buildings, is able to pay the high rents necessary in the competition for space. In the second place the public generally exerts pressure to drive vice out of the community market, although, as will be pointed out later, a large part of it is able to evade suppression and surveillance through subterfuge and camouflage. But commercialized vice can assume a decentralized location without threatening its existence. The very urgency of its demand, namely, this desire for sexual thrill, means that patrons will seek the supply even in the most remote places of the city. In fact, the delay entailed in

this pursuit adds to the intensity of the urge as well as to the excitement of the chase.

The central position of commercialized vice may be said to represent the natural, unimpeded play of economic forces. The decentralized or outlying location signifies, in the main, a reaction to political factors, namely, those of legal control and public suppression. However, rapid transit and the automobile have made these ordinarily remote sections readily accessible, and consequently commercialized vice has gone with the tide of an outgoing pleasure traffic.

VICE AREAS RELATED TO THE NATURAL ZONES OF THE CITY

A study of the particular regions of the city in which commercialized vice flourishes will reveal more definitely the factors that determine the distribution and location of this activity throughout the community. In order to get an accurate picture of the exact regions in which commercialized vice exists, a spot map was made from the cases dealt with by the Committee of Fifteen of Chicago during 1922.[1] The vice resorts handled by this law-enforcing agency extended radially from the center into the surrounding residential areas, principally along the important traffic arteries. Transferred to E. W. Burgess' chart describing the natural organization of the city,[2] the commercialized vice areas as revealed by this spot map are found to be implanted upon the central business zone (Zone I), the zone of transition (Zone II) with its slums, immigrant and racial colonies, lodging- and rooming-house area, and

[1] The year 1922 was selected to show the more recent tendencies in the distribution of vice in the modern American city. Ten years earlier, before public repression had produced its noticeable effects, the vice resorts, if plotted, would probably show a greater concentration in the near central regions and less dispersion into the more decentralized neighborhoods.

[2] See chart in Park and Burgess, *The City* (University of Chicago Press, 1925); article by E. W. Burgess on "The Growth of the City," *ibid.*, p. 55.

the restricted residential zone (Zone IV), which includes apartment houses as well as single homes.[3] It may be said, therefore, that commercialized vice areas represent a parasitic formation, since they thrive upon the natural organization of the city.

THE ADAPTATION OF COMMERCIALIZED VICE TO NATURAL AREAS

A closer examination of the Committee of Fifteen data in reference to the economic and cultural order of the city shows that this agency was dealing with assignation hotels in the central business district, brothels in the slum, and "immoral flats" in the high-class residential area. It is clear, therefore, that commercialized vice makes special adaptation to the type of neighborhood invaded. The peculiar conditions characterizing these regions in which commercialized vice is located constitute very definite factors in the distribution and segregation of this parasitic activity.

Prostitution, supposedly excluded from the center of the city, actually, however, is able to evade surveillance by certain camouflages. While the brothel type of prostitution in most instances cannot exist in the central business district, not merely because of its open, public character, but also because of its inability to command a site in face of competition from financial, retail, and wholesale establishments, the freer and more clandestine form of commercialized vice surmounts these obstacles. Streetwalkers have never been eliminated from the downtown districts. Moreover, the activities of the streetwalker in very recent times is not so easily distinguished from the rather wide-spread practice of making casual

[3] In Chicago the rooming-house district of Zone II and the apartment-house area of Zone IV merge into one another on the direct south, west, and north sides, a fact which is due primarily to the high value of land resulting from favorable locations and good transportation facilities. The zone of workingmen's homes (III) in Chicago is found largely on the northwest and southwest sides of the city, outside the lines of greatest mobility, and consequently outside the regions in which commercialized vice flourishes best. However, it is doubtful whether the vice resorts in any city can successfully invade Zone III because of the strong family and neighborhood organization found there.

acquaintances. A large number of these clandestine prostitutes have access to the cheaper hotels, many of which are used for assignation purposes.

Prostitution is frequently an insidious adjunct to the downtown "high life," the social whirl centering about the restaurants, the cafés, the theaters. The existence of commercialized vice in the central business district is an inevitable part of the flux and flow of the region. Besides being a market place for thrill, the downtown district is a region of anonymity, where conduct either remains uncensored or is subject merely to the most secondary observation and regulation. Under such conditions personal taboos disintegrate and appetites become released from their sanctioned moorings.

But streetwalking and assignation hotels by no means exhaust the adaptations which commercialized vice makes to the central business district. It frequently insinuates itself under the protective coloration of massage parlors and bathhouses. In these instances the "vice interests" are exploiting a very natural relationship of bathing and massage to sexual excitement.

THE SLUM AS THE HABITAT OF THE BROTHEL

The area of deterioration encircling the central business district furnishes the native habitat for the brothel type of prostitution. All the conditions favorable to the existence of this flagrant, highly organized form of commercialized vice are to be found there. In the slums the vice emporia not only find very accessible locations, but also experience practically no organized resistance from the decaying neighborhoods adjacent. And, furthermore, they are located in a region where the pattern of vice is an inevitable expression or product of great mobility and vast social disorganization.

UNORGANIZED PROSTITUTION IN ROOMING-HOUSES

The rooming-house sections and, to some extent, the tenement districts harbor an unorganized form of prostitution. The free-

lance, clandestine prostitutes, unattached to brothels, resort frequently to furnished rooms as a place to live and "bring tricks." The landlords or landladies either demand high rents from them or require a special room tax on each service. Because of the great anonymity in these rooming-house areas the activities of these prostitutes go on relatively unnoticed and consequently undisturbed. Here again the location is one of proximity to the demand, for it is a matter of common observation that the rooming-house and lodging-house areas quarter the hordes of homeless men in the community.

IMMORAL FLATS IN APARTMENT-HOUSE AREAS

Commercialized vice has recently invaded the livelier apartment-house districts of the city and has appeared at this location in the form of "immoral flats," "buffet flats," and "call flats." The presence of vice in this decentralized part of the city, such as in the rooming-house sections and even on the fringe of the community, is due partly to a reaction to public repression. But the prostitution which has fled the slum for the apartment-house area has materially changed its external dress. Commercialized vice in the apartment house, as a rule, seems to be much less organized and much more refined than it is in the brothel.

The immoral flats are really only accessible by taxicab or automobile, since they hug the boulevards rather than the street-car lines. They attract, therefore, a high-class patronage, a sporting element that does not subscribe to the cheaper entertainment provided by the brothel. The apartment areas in which this externally changed form of prostitution is found present a very inviting field to commercialized vice, not merely because of the lively and mobile character of these regions, but also because of the anonymity and individuation produced by the highly mechanized living conditions.

INDEXES OF COMMERCIALIZED VICE AREAS

Certain of the factors and forces that determine the distribution of vice throughout the community are reducible to indexes, which help to delimit, as well as explain, the distribution of vice in the city. It may be said that commercialized vice is found in those regions characterized by burlesque shows, rescue missions, crime and other major social problems, immigrant and racial colonies, disproportion of sexes, declining population, and high land values and low rents.[4]

THE BURLESQUE SHOWS

The burlesque shows of large American cities, if plotted on a map giving the distribution of vice resorts, would fall within the areas in which flourish the most open, public forms of prostitution. This part of the larger commercialized vice areas of the city is really the homeless man's playground, for, besides these cheap theaters, the brothels, saloons, gambling-dens, fortune-tellers, "dime museums," and lady barbers compete with one another in catering to the play and sex interests of the non-family men of the slum. The burlesque show, or "border drama," is symbolic of the fact that a veritable man's community, with all its characteristic patterns of disorder, exists at the core of the city.

THE RESCUE MISSIONS

It is well known that the rescue mission has pioneered among the brothels and vice resorts of the urban community. From a spot map showing the characteristic institutions of hobohemia in Chicago it is quite evident that these rescue missions are located on, or

[4] For more detailed discussion of these indexes, see Walter C. Reckless, "Indices of Commercialized Vice Areas," *Journal of Applied Sociology*, January–February, 1926.

adjacent to, the notorious rialtos of the underworld.[5] In fact, the "church on the stem" has grown up to reclaim the "lost souls" of the city's slums, and consequently points to social forces at work in the community to counteract those making for demoralization.

CRIME AND OTHER SOCIAL PROBLEMS

The underworlds of vice and crime have usually been inseparable. The distribution of crime throughout the urban community portrays, in the main, the location of commercialized vice. A spot map of felony cases,[6] giving the place of the crime and the address of the criminal, which were reviewed by the Chicago Crime Commission during 1921, describes about the same territorial distribution for crime as the spot map of the cases dealt with by the Committee of Fifteen of Chicago in 1922 does for vice.[7] On analysis it appears that both crime and vice depend upon mobility and collections of people; both forms of activity are legally and morally isolated and consequently must hide in the disorganized neighborhoods in order to thrive. It is also interesting to note that commercialized vice exists in the same general regions of the city characterized by the distribution of the cases of poverty, divorce, desertion, suicide, abandoned infants.[8] Indeed, these problems, considered ecologi-

[5] This map was prepared by Nels Anderson in his study of *The Hobo* (University of Chicago Press, 1923). It was not included in the first printing of the study.

[6] The spot map of felony cases reviewed by the Chicago Crime Commission was prepared by Clifford Shaw, research fellow in the Department of Sociology at the University of Chicago.

[7] There are certain discrepancies between the two maps. As would be expected, crime shows a somewhat wider distribution than vice. Furthermore, a large proportion of burglaries occur in the wealthier residential districts, which are usually free from commercialized vice.

[8] Observation based on a comparison of the distribution of these social problems in Chicago as shown by spot maps prepared by the Department of Sociology at the University of Chicago.

cally, indicate the areas of greatest social disorganization within the city.

IMMIGRANT AND RACIAL COLONIES

Since commercialized vice thrives amid the vast social disorganization of the urban community, the major part of which is localized in the slum, it is to be expected that the underworld intrudes itself in the immigrant and racial colonies. The relationship of Chinatown to the commercialized vice areas of American cities is too well known to need elaboration. It is only fair to say, however, that the assumption of the usual parasitic activities by the Chinese in the Western World is probably to be explained by their natural segregation at the center of cities, as well as by their uncertain economic and social status.

The "black belts" of American cities have usually been located in or adjacent to the vice areas, while the Negroes themselves in face of limited occupational opportunity, have of necessity found work as maids and porters in the vice resorts.[9]

Vice resorts are also found in the settlements of the most recent foreign immigration, which must generally take over the most undesirable sections of the slum in order to gain a foothold in the community. But commercialized vice does not invade all immigrant settlements. Those like Little Italy and the Ghetto, with a strong family and neighborhood organization, are relatively free from prostitution.

Vice is more characteristic of the cosmopolitan areas of the city, which represent a sediment of caught families and individuals from the various classes and nationalities. Since group controls in such regions have practically disintegrated, social life tends to be unregulated and often disorderly.

[9] See the report of The Commission on Race Relations, *The Negro in Chicago*, pp. 342–43.

While burlesque shows, rescue missions, crime and other major social problems, immigrant and racial colonies are valuable as rough indicators of the location and ecological setting of commercialized vice, the disproportion of sexes, declining population, and the correlation of high land values and low rents more nearly approximate indexes as used in the scientific sense; for in the first place, they are capable of mathematical formulation, and in the second place, they reveal factors and forces fundamentally related to commercialized vice in the chain of causation.

THE DISPROPORTION OF SEXES

The drift and gravitation of innumerable casual workers, tramps, hobos, bums, into the twilight zone between the central business district and the area of deterioration surrounding it has stimulated the development of so-called "womanless slums," and consequently has created a very marked disproportion of sexes.

The disproportion of sexes, on analysis, discloses certain conditions which underlie the very existence of commercialized vice. Men's communities and "hobohemias" have ever been characterized by the presence of prostitution. Westermarck has shown that a primitive sort of prostitution existed in Easter Island, where the men greatly outnumbered the women.[10] Bloch, in his study of *Die Prostitution,* specifically states that the men's communities of classical antiquity, namely, the university towns and the military camps, provided a fertile soil for the activities of prostitutes.[11] According to Bancroft, vice ran amuck in the mining camps of California's Gold Rush when, in 1850, the female population consti-

[10] Citing Geiseler's *Die Oster-Insel* (p. 29), Westermarck makes the following statement: "In Easter Island, where there were many more males than females, some of the young women remained unmarried and offered themselves up to the men," *History of Human Marriage,* 3d ed., I, 137.

[11] See *Die Prostitution,* I, 252.

tuted less than 2 per cent of the total in the mining counties.[12] To take a more recent example, attention has been called to the fact that commercialized vice is rampant in Pekin of the present day, where the male population amounts to 63.5 per cent of the total number of inhabitants for that city.[13]

The disproportion of sexes acquires greater significance as an index of commercialized vice when taken in connection with marital status. The homeless man is not merely footloose; he is usually unmarried. In his study of *The Hobo,* Nels Anderson makes the following pertinent statement:

> Of the one thousand men studied by Mrs. Solenberger (1911), 74 per cent gave their marital status as single. Of the four hundred interviewed by the writer, 86 per cent stated they were unmarried. Only 8 per cent of the former, and 5 per cent of the latter, survey claimed they were married. The others claimed to be widowed, divorced, or separated from their wives.[14]

As a result of the personal disorganization incident to this detachment from family life the sex impulses seek outlets in the unapproved channels, not merely in prostitution, but also in perversion.

Furthermore, the homeless man of the city's slums usually suffers from sex isolation, due to his great mobility, his low economic status, and his unpresentable appearance. About the only accessible women are the lower order of prostitutes. The vagrant men of all time, because of their social-pariah existence and their resulting sex isolation, have of necessity subscribed to commercialized vice.

DECLINING POPULATION

The density of population is frequently used as a criterion to explain the major problems of city life. And, offhand, it would

[12] See *History of California,* IV, 221–39, for account of rampant vice conditions; pp. 221–22 for statement of disproportion of sexes in 1850.

[13] Gamble, Sydney David, *Pekin: A Social Survey* (New York, 1921), pp. 243–44.

[14] *The Hobo,* p. 137 n.

seem that this principle would apply to commercialized vice. For prostitution flourishes in the areas of highest density within the city, namely, in the slum, where there is great concentration, while it is conspicuously absent from decentralized neighborhoods with a comparatively low density. This general relationship can be shown by a transposition of the Committee of Fifteen data on a density base map of the city.

But there are sections of the downtown environs which are outside the radial distribution of commercialized vice and yet are within the circle of the most thickly populated areas in the city. Certain immigrant colonies are cases in point. Foreign settlements are frequently protected against a wholesale invasion of commercialized vice not merely by virtue of their semiremote location, but also by a strong family and neighborhood organization. Furthermore, on the outskirts of the city commercialized vice is very often lodged at roadhouses, which flourish in the most sparsely settled regions of the urban community.

It is the type of community organization, rather than the density of population, that has the direct bearing on the presence and distribution of vice. This is the reason why declining population, rather than sheer density of population, is the more satisfactory index, since it points to a lack or a disintegration of community organization, and consequently to a condition in which commercialized vice can exist best. According to maps showing the comparative density of the census districts in Chicago, it was found that certain sections contiguous to the central business section revealed a marked decline in the number of inhabitants in 1920 as over against 1910.[15] These areas of declining population are precisely the ones which harbor the brothels, according to the Committee of Fifteen cases for 1922. Indeed, commercialized vice, as

[15] These maps were prepared by Nels Anderson, research fellow in the Department of Sociology at the University of Chicago.

already noted, is merely one of the many symptoms of the intense social disorganization in these twilight neighborhoods at the core of the city, neighborhoods which are decaying in the inevitable transition from residence to business.

THE CORRELATION OF HIGH LAND VALUES AND LOW RENT

Indicative also of this transition and disorganization is the correlation of high land values and low rents which describes a condition of neighborhood deterioration in the slum area about the center of the city. It is known that high land values appear at the traffic centers. In fact, they are a product of mobility of population, which in turn creates a situation of social instability and flux—a setting in which the pattern of vice thrives. Furthermore, commercialized vice almost inevitably develops in these areas of great mobility which, after all, become the natural market-place for thrill and excitement.

The slum, which has ever sheltered the most blatant forms of commercialized vice, has generally been noted for its fluidity and kaleidoscopic life, and the high land values in this zone of deterioration certainly indicate this condition of great mobility and disorganization. The land here not only has a relatively high value because of its centralized, and thereby accessible, location, but also has a speculative value, due to the approach of business itself.[16]

The improved property in these mobile, decaying neighborhoods that are in direct line of business expansion is allowed to run down, to deteriorate, for upkeep generally results in a total loss to the owner, since business only ordinarily demands the site. These deteriorated dwellings of the slum, because of their undesirability,

[16] This condition of relatively high land values in the zone contiguous to the central business district may be indicated by a study of the land-value data given for the entire city of Chicago in Olcott's *Blue Book of City Land Values.*

can command but very low rents.[17] It is unavoidable that the poor and vicious classes share the same locality in the city's junk heap.

The relationship of the distribution of commercialized vice to neighborhood deterioration and the value of the correlation of high land values and low rents as an index of the vice areas may be indicated by the following statement of findings:

> By actual count in the city of Seattle over 80 per cent of the disorderly houses recorded in police records are obsolete buildings located near the downtown business section, where land values are high and new uses are in process of development.[18]

It is clear that the distribution of commercialized vice in the city comes about through the working of factors determined by the economic, political, and cultural organization of the community as well as through the operation of forces lodged in human nature. The segregation of vice into characteristic urban areas is, therefore, the result of a natural process of distribution rather than—as is so often thought—a sheer artifice of legal control.

The propositions expounded in the foregoing analysis are not presented in terms of absolutes, especially in view of the fact that the factual material for this paper was drawn from an intensive study of the growth and development of vice areas in Chicago.[19] They are merely working hypotheses which invite the challenge of future investigation.

[17] A map based on a field study of rents in Chicago by the Illinois Bell Telephone Company in 1921 shows that just surrounding the central business district there is a section of low rents, the lowest in the city.

[18] R. D. McKenzie, "The Ecological Approach to the Study of the Human Community," *American Journal of Sociology,* XXX (November, 1924), 299 n.

[19] See Walter C. Reckless, *The Natural History of Vice Areas in Chicago,* University of Chicago, 1925 (Doctor's dissertation).

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COMMUNITY PARTICIPATION IN CITY AND REGIONAL PLANNING

RESEARCH IN THE SOCIAL SCIENCES

This discussion on community participation in city and regional planning is based on the hope that if the problems and experience in one department of social and civic endeavor are set alongside those of another department some current questions of importance may find, if not answers, at least a little new light cast upon them. The first of these problems or experiences is concerned with the need of more research in the social sciences. A number of students of social and political tendencies and of public affairs during the last few years have been pointing to dangers due to the way in which the social sciences have been lagging behind the physical sciences. These students have observed the great advances in the physical sciences, both as to the broad range of activities engaged in and also as to the extremely rapid way in which one brilliant discovery crowds upon the stage after another. They point to the large number of new discoveries and inventions in transportation, communication, commerce, mining, and manufacturing, and show how most of these developments had their beginnings in the study and researches of men and women in such fields as chemistry, physics, mathematics, metallurgy, geology, and the rest. The great expansion of the automobile industry, to take a single instance, and the growth of motor transportation go back to the investigations which made possible the gasoline engine, rubber tires, and the storage battery. This kind of research helps in the development of natural resources and material prosperity, and, as compared with research in the social sciences, has had generous support.

It is pointed out, however, that these advances have not been made without the emergence of new questions of social adjustment. Physical environments and social relations are changed quickly and people have difficulty in accommodating themselves to the new conditions, the results sometimes being serious. The heavy annual toll of deaths from automobile accidents and the still larger number of serious injuries, not to mention the complex problems of street traffic congestion which have come with the motor car, are illustrative. It is also being suggested that certain health problems have at least been aggravated by the tension and strain which has accompanied an age where the pace set for the daily round of life has been considerably accelerated.

While no one, or certainly very few, would wish to hold back the development of natural resources or the scientific research which lies behind it, it is urged that the time has come for greater attention to the social sciences—to research which will inquire into the best uses to be made of our new physical assets. More study of questions of social welfare is needed, not only as a means of meeting new problems and preventing the loss of ground already gained, but also in order to discover how to step forward, how to make our growing material and physical endowment a greater advantage to individuals, families, and communities.

But the line of thought is carried a step farther, and it is urged that even with a new fund of social information in hand the task faced by the community is not finished. The information needs to be used effectively. More must be done than heretofore in seeing that the new knowledge becomes widely disseminated. It must be made a part of the everyday experience of an ever widening circle of citizens in each locality if the common welfare is to be fully served. Although very few offer suggestions as to the methods to be employed in this very considerable educational task that is laid bare, all agree upon its importance and that it must be undertaken.

In sum, then, an important problem in one field of work is set forth by thoughtful observers of the times. As they see it, the physical sciences which factor large in production processes are adding extensively to the material well-being of community life; the social sciences, whose function it is to give light upon methods of control of new forces and powers for the social well-being, are moving at a disproportionately slower rate; the pace of the latter needs to be quickened; and along with increased activity in social research must go greater attention to the spread of the new knowledge of social import as it is produced.

REGIONAL PLANNING

Turning now to a second department of work, let me call your attention to certain experiences which the city planning movement is going through, and problems faced by it. Among these is the considerable attention which has been given to regional planning in this country during the last few years. It has been seen that city borders or other political boundaries are often arbitrarily established, and that instead of defining the outer limits of districts which are social and economic entities these lines often cut across and divide these entities. The future growth and development of systems of transportation and communication, for example, are matters of common interest to the people within commuting distance of a large population center, whether or not they live in the same city, county, or state. Many problems of future planning do not stop at the city line; and in order to deal as effectively as possible with probable future needs in urban districts these more or less artificial boundaries are being disregarded, and the region, marked off in accordance with some major interest or function to be performed for those living within it, is being taken as the basis of action.

Among other things, this has meant a rough division of planning questions into those on the one hand which relate to major elements of the design or pattern for the region's growth, and those on the other hand which are entirely local or practically so. In other words, while regional planning means centralization in dealing with questions of common interest extending over a large area, it also means definite decentralization as far as questions of strictly local interest are concerned. It proceeds on the belief that the responsibility for local matters should be assumed locally, and that it will be. It assumes further that neither the region as a whole nor the neighborhoods as parts can afford to ignore the mutual ties which unite them. They need to co-operate to the end that the plan for the whole, far from setting up barriers and difficulties for the various neighborhood entities, should conserve and promote such groupings, and at the same time should provide the region-wide services which will make the whole area a better place in which to work and to live. Planners are recognizing increasingly that these ends can only be brought about through the co-operation of the region-wide and the local agencies, on a basis which will recognize the separate and distinct responsibilities each should bear.

Another tendency of recent city and regional planning is the increasing emphasis placed upon the investigation of problems and conditions of the given areas as a preliminary to planning. A certain amount of investigation has practically always been carried on in this connection; but it seems fair to say that very few, if any, previous plans in this country have given as large a place to the investigational phase of the task as have practically all of the important undertakings in this field during the last four or five years. And this has been all the more interesting because these recent plans have given much more attention to the study of distinctly social questions than was customary heretofore. While city planning, viewed broadly, has always been aimed at the creation of an

environment which would not only exert a corrective, but also a preventive, influence in dealing with causes of social wrong and social maladjustment, it has been realized latterly that many problems with which the plan must deal have such important social phases and implications as to require special study from that angle as well as from the others. That is to say, city and regional planners are seeing an increasing number of social burdens carried by individuals and communities toward the relieving of which better planning ought to be able to make a substantial contribution.

Still another new note is the increasingly acknowledged necessity of regarding city and regional planning in very large measure as an educational enterprise. Such planning is aimed toward the improvement of community and regional conditions; but the improvements will not be brought about except as residents of the districts are convinced of the wisdom of the measures proposed and are accordingly willing to get behind the plans. In few, if any, regions will a body be found with jurisdiction over all parts and power to enforce its proposals; but even if such an authority were to be found, its powers of effective enforcement of plans would after all be limited by the extent of the public opinion supporting them. And in the cases where no such official bodies exist, the chances of securing action on proposals made are even more dependent upon a public opinion convinced of their merits. And all this is as it should be; for it is believed that if advances—whether they relate to the region as a whole or only to particular neighborhoods—are to be permanent they must be grounded in popular understanding of their value.

LOCAL COMMUNITY STUDIES

The third major type of endeavor in which a new trend of interest and experience appears to be developing concerns the large number of neighborhood and community groups in small and large

cities that are requesting help and materials for the study of their own localities. These range all the way from Bible study classes which have become interested in social service, civic improvement committees in women's clubs, and city planning committees in local chambers of commerce and commercial associations, to official planning commissions for different localities. It is difficult to estimate the number of such groups in the New York region, but from the numerous requests for assistance which have been coming to our offices the total would seem to be large—upward of one hundred perhaps—and the number seems to be increasing.

These groups, like the others, have observed changes going on in the communities about them, changes which have created new problems calling for some kind of study and analysis as a first step toward constructive public action. Social and civic difficulties are pressing for attention, there is potential and actual interest in them among organized groups of citizens, the necessity of inquiry into the essential facts with a view to increasing the public information is obvious, and suggestions for the local groups as to a method of setting to work are welcomed by them.

THE PROJECT METHOD

And now alongside of these three trends of experience I wish to suggest still another in quite a different field: the project method, which seems gradually to be gaining acceptance in the public schools. This method came into existence, I am told, partly as a result of the failure of the older view of teaching as being "something done by the teacher to the student" and partly as a result of new psychological knowledge of the learning process. In this it is made tolerably clear that we learn through experience. In the last analysis we educate ourselves. Books, libraries, teachers, laboratories, are great aids, but they are only that: aids. Education itself must come through participation; we learn in the main "by doing."

The project method therefore seeks to find or invent situations in which the student may take part as realistically as if the thing were an event in his daily life outside the school. The teacher is on hand, not to instruct him what to do, but to stimulate him to a thorough thinking-through and evaluation of the factors to be taken into account in each situation. The nearer such projects can simulate real situations in life the greater are their educational possibilities and value, and thus the best teachers are those who can make the school itself represent a real community and find projects in this school community for as many classes as possible, from the groups studying English and mathematics to those engaged in the study of civics and government.

From the time when Professor Langdell introduced the case method of teaching in the Harvard Law School to the project method being adopted today there has been an increasing effort to use situations which, through study, analysis, criticism, the exercise of judgment, initiative, and creativeness, will prepare the student to deal with situations into which he will be thrust outside the school. From this point of view he is not educated until he is able to criticize existing social, political, and moral values as a part of the process of studying them and as a preparation for determining his own action when the time comes.

Here, then, are four trends or types of experience. One of them points out the need of more social research and the effective use of the information so secured—this as a means of assisting citizens, at present and in the future, better to cope with current social problems and to promote the common welfare.

A second trend shows the modern city planning movement emphasizing the need of more thorough study of problems of future growth, and particularly of the social aspects of planning; emphasizing also the necessity of taking larger units for study and planning—regional areas of such size as will make it possible to deal

with problems in their various ramifications, a movement differentiating between regional and local questions, leaving the responsibility for local studies to local groups, and concluding that regional and local planning will be unsuccessful unless they are treated to a considerable extent as educational enterprises.

A third trend shows a growth of interest in problems of social welfare on the part of local groups, study clubs, civic societies, and committees of numerous civic and social agencies, a desire to shoulder local responsibilities in connection with them; and it shows these groups to be civic resources as yet only partially utilized.

A fourth trend lays emphasis on a new method of education—education through participation in projects as nearly real as possible.

Out of a consideration of these four tendencies there seems to me to come a clear suggestion. It is that in the project method lies an opportunity for securing some of that local understanding of the regional plan (and I am speaking generally—not of the New York undertaking only) which is essential to its success, an opportunity for education through participation in the study of both general regional proposals and of specific local problems, and an opportunity to secure the criticism and suggestions of local bodies which will aid in the final shaping up of the most workable plan. That is on the one hand. On the other hand it seems to me that an even greater opportunity resides in these cross, or mixing, currents: it is the chance for the regional plan to provide projects and project material which can do something toward increasing the knowledge of the present generation, and the oncoming one now in the public schools, regarding the social and civic questions which are crowding the community for attention.

Here, in various aspects of planning, is the real thing in the way of situations to be studied. It is not necessary to simulate cases for educational purposes. The field is full of the actual, in

the study of which very vital and absorbing interests of going communities are concerned. If this method, as would seem by its increasing adoption, is really fulfilling the promises made for it, should it not be seized upon by regional and city plans as an instrument for popular education on planning questions, when so favorable an opportunity as those afforded by citizen groups formed for study and by larger school-room demands for live, current material are coming forward?

I am fully aware that this would not meet all the demands for current social research; nor would it relieve the regional plan of many of its major investigational tasks, of course. On the other hand the plan would be amply repaid for the projects it would provide by the specific local and regional suggestions it would receive. But important as that is, it would, I believe, be promoting something still more important. It would be affording people of the region a means of doing their part in securing a better region and better communities in which to live, and it also would be helping to give citizens who will live in these communities a better understanding of local social issues on which they will need to act. It ought to provide the most important textbook on civics, or rather the best budget of civic projects for all kinds of study, to be found almost anywhere.

Indeed, something of this kind in the way of providing project material has been started in the New York region (and I daresay that I should have found illustrations in other regional plans as well if I had found it possible to inquire). One of the first pieces of printed matter issued by the Regional Plan of New York and Its Environs was an outline of suggestions for men and women, not experts, but laymen, engaged upon the study of local plans. In setting forth the purpose of the outline it was stated that the Committee on Regional Plan is engaged upon a long task; that it has already collected much statistical and other material of a kind

required for any logical and effective regional planning; but that it will be many months before the plan as a whole can be formulated, criticized, and finally submitted to the public for decision. Meantime it was thought that the data gathered ought to be made immediately useful, and as a step in the direction of co-operation between regional and local groups the outline of suggestions was offered.

Another type of co-operation with local groups offered by the New York Regional Plan has been the furnishing of speakers for meetings in the various communities where members of organizations were either taking their first steps to inform themselves on the subject of city or regional planning in general or have been discussing specific plans or parts of plans related to their own localities. Many such meetings have been held, the character of most of them being more that of an open-forum discussion than of a session of auditors at a lecture. While speakers could not be, and were not, sent as substitutes for necessary professional advisors, the discussions have without doubt added to the local organization's knowledge regarding its own planning interests and responsibilities, and have been useful as educational measures.

Further, the Regional Plan of New York has recently started an experiment in one section of the region aimed to stimulate thought and public discussion of planning questions relating to that section. It has issued two brief bulletins setting forth, not particular proposals as yet, but some considerations which are more or less definitely applicable to parks, boulevards, and community planning on Long Island. These are the first of what is to be a series of contributions to the discussion of Long Island's planning problems.

How much influence these efforts have had in the spread of interest in local planning throughout the region it is difficult to state, but it has been interesting to note for one thing that there are at

present some forty local planning commissions in different parts of the New York region, a number more than twice as large as that when the regional enterprise was first started.

Of use in the project method of studying local conditions is a system of symbols for representing social data on maps, which is largely the work of Ralph G. Hurlin, director of the Department of Statistics of the Russell Sage Foundation. It was begun some time ago in response to requests for some scheme which might aid the many who are showing social data graphically to use the same language, so to speak. There are more than one hundred different symbols in the system, and an effort has been made to choose such as are practically self-interpreting.

Since work on these symbols has been begun it has become reasonably clear from conversations with teachers in the public schools and a few colleges that they may be used effectively in connection with school projects involving the study of social conditions. It is believed further that they have possibilities for study groups outside the classroom.

The possibilities which lie in this situation are illustrated in a story related by Angelo Patri, of a boy of nine who came to this country from Sicily some years ago. The steamer which brought him came up the New York harbor on a crisp sunny February morning, and the boy was out on deck eager to catch sight of the land which had been pictured to him as the land of freedom, of opportunity, and of encouragement. The steamer came on until the tall buildings looming up at the southern end of Manhattan could be seen, and then his excitement knew no bounds. He saw flags fluttering everywhere and, not knowing that it was Lincoln's birthday, he thought they were out to welcome him.

A few days later found him in a crowded East Side tenement and with all his excitement over. He had started to school. Cramped and dismal home surroundings, together with language

difficulties in the classroom, had made his disillusionment complete. But one day he took a piece of hand-carved wood—his own work—to show to his teacher. The teacher at once saw signs of real talent in it, and she got him transferred to Mr. Patri's school in another part of the city. Mr. Patri seemed to understand him at once, and put him to work under the direction of a sculptor. By the time the boy had finished high school he had won distinction as an artist, and later won a prize which provided for several years of study in his chosen field in Rome.

The day before he sailed to take up his further studies he went to take his leave of Mr. Patri. Their conversation went back to the boy's early experiences in America, and a new thought seemed to strike him, which ended with the remark: "Do you know, those flags really *were* out for me, after all! I got the kind of a welcome in America that Abraham Lincoln would have had me get."

I have sometimes wondered in this connection whether the project method, which seems to have been utilized to such great advantage in some departments and by which this boy seems to have greatly benefited, does not offer more than we may yet suspect in educating the present and oncoming generation for a fuller participation not only in city and regional planning but in the social, civic, and political life of our communities in general. There is a possible project field for almost every type of talent, from that possessed by the person whose ability might not go beyond indicating on a map the social and civic institutions of the community to the statistician who can handle the processes in higher mathematics involved in pursuing modern methods of predicting population growth. If we gave the suggestion a real trial, who knows but that we might not only discover an occasional genius in social and political science, with possibilities of great service in leadership, but we might also discover a way of greatly increasing the number of

informed persons in the community on whom ultimately decisions must rest regarding grave matters of public policy.

In so far as their information bears on city and regional planning, we would have greater assurance of better ultimate plans, whether they happen to be *our* plans or those of someone else; and, what perhaps is still more important, a great many more people might be enabled to live fuller lives by finding a way by which they might make their contribution to the welfare of the community.

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THE NATURAL AREAS OF THE CITY

THE CITY AS ARTIFACT AND AS NATURAL PHENOMENON

To the philosophically minded the city has often seemed to be the most colossal artifact of man's creation. The towering skyscrapers of a New York or a Chicago, palatial banking houses, the frenzied stock exchange, a Fifth or a Michigan Avenue with its ceaseless stream of automobiles and busses, its smart shops, and its brilliant hotels, underground tubes with roaring trains, or elevated railroads clattering overhead, great belts of smoking industries, miles of canyon-like streets flanked with tall apartments, magnificent park and boulevard systems, water works besides which the Roman aqueducts fall into insignificance—all in all the city seems the most exotic and artificial flower of a man-made civilization, a product not alone of man's brawn, but of man's brain and man's will.

Yet the city is curiously resistant to the fiats of man. Like the Robot, created by man, it goes its own way indifferent to the will of its creator. Reformers have stormed, the avaricious have speculated, and thoughtful men have planned. But again and again their programs have met with obstacles. Human nature offers some opposition; traditions and institutions offer more; and—of especial significance—the very physical configuration of the city is unyielding to change. It becomes apparent that the city has a natural organization that must be taken into account.

In the latter part of the past century and the early years of this present century a tidal wave of reform swept over the city, culminating in the "Man with the Muckrake" and the "Yellow Press." Jacob Riis painted the descent into the slum. Parkhurst crusaded against vice in New York; and Stead, in *If Christ Came to Chi-*

cago, lashed the lords of Customs House Place. Ida M. Tarbell and Upton Sinclair took the muckrake into industry, while Lincoln Steffens laid bare the rotten spots in city government. There was a tremendous stir, public interest was aroused, reforms were proposed, but little happened. Practically all these movements for social reform met with unexpected obstacles: influential persons, "bosses," "union leaders," "local magnates," and powerful groups such as party organizations, "vested interests," "lobbies," unions, manufacturers' associations, and the like. Candid recognition of the rôle of these persons and groups led writers on social, political, and economic questions to give them the impersonal designation of "social forces."

The concept of social forces was a common-sense generalization. But implicit in Steffen's book, *The Shame of the Cities,* was a far more sophisticated insight. Steffens maintained that with his knowledge of New York he could go into any city and quickly gauge conditions; that conditions in New York were not due to a failure of institutions peculiar to itself, but to a condition incident to the growth of all cities. This was the first recognition of the fact that the city is a natural phenomenon and has a natural history.

Meantime, realtors, public utilities, city-planning and zoning commissions, and others interested in predicting the future of the city were discovering much about the way in which the city grows. Richard Hurd, in a small volume, *The Principles of City Land Values,* attempting to generalize fluctuations of city land values, formulated certain typical processes of the city's growth. Most instructive are the more recent statistical studies of the American Bell Telephone Company and other utilities for the purposes of extension in anticipation of future service. The city is discovered to be an organization displaying certain typical processes of growth. Knowledge of these processes makes possible prediction of the di-

rection, rate, and nature of its growth. That is, the city is found to be not an artifact but a natural phenomenon.

A HUMAN ECOLOGY

In an address in 1922, before the meeting at which the Russell Sage Foundation's proposal for a regional plan for metropolitan New York was first outlined, Elihu Root recognized this fact of the natural organization of the city when he said: "A city is a growth. It is not the result of political decrees or control. You may draw all the lines you please between counties and states; a city is a growth responding to forces not at all political, quite disregarding political lines. It is a growth like that of a crystal responding to forces inherent in the atoms that make it up." In the three years that have elapsed since Elihu Root wrote these words, a mass of material about the city has been gathered and analyzed that enables us to describe these "atoms" to which he referred.

Studies of the expansion of the city have shown that all American cities exhibit certain typical processes in their growth.[1] To begin with, they segregate into broad zones as they expand radially from the center—a "loop," or central business district, a zone of transition between business and resident; an invasion by business and light manufacturing, involving physical deterioration and social disorganization; a zone of working men's homes, cut through by rooming-house districts along focal lines of transportation; a zone of apartments and "restricted" districts of single family dwellings; and, farther out, beyond city limits, a commuters' zone of suburban areas. Ideally, this gross segregation may be represented by a series of concentric circles, and such tends to be the actual fact where there are no complicating geographical factors.

Such is a generalized description of the gross anatomy of the

[1] E. W. Burgess, *"The Growth of the City—An Introduction to a Research Project"* in *The City*, by Robert E. Park *et al.*, pp. 50 ff.

city—the typical structure of a modern American commercial and industrial city. Of course, no city quite conforms to this ideal scheme. Physical barriers such as rivers, lakes, and rises of land may modify the growth and structure of the individual city, as is strikingly demonstrated in the cases of New York, Pittsburgh, and Seattle. Railroads, with their belts of industry, cut through this generalized scheme, breaking the city up into sections; and lines of local transportation, along the more travelled of which grow up retail business streets, further modify the structure of the city.

The structure of the individual city, then, while always exhibiting the generalized zones described above, is built about this framework of transportation, business organization and industry, park and boulevard systems, and topographical features. All of these break the city up into numerous smaller areas, which we may call natural areas, in that they are the unplanned, natural product of the city's growth. Railroad and industrial belts, park and boulevard systems, rivers and rises of land acting as barriers to movements of population tend to fix the boundaries of these natural areas, while their centers are usually intersections of two or more business streets. By virtue of proximity to industry, business, transportation, or natural advantages each area acquires a physical individuality accurately reflected in land values and rents.

Now, in the intimate economic relationships in which all people are in the city everyone is, in a sense, in competition with everyone else. It is an impersonal competition—the individual does not know his competitors. It is a competition for other values in addition to those represented by money. One of the forms it takes is competition for position in the community. We do not know all the factors involved, but each individual influences the ultimate position of every other individual.

In this competition for position the population is segregated over the natural areas of the city. Land values, characterizing the

various natural areas, tend to sift and sort the population. At the same time segregation re-emphasizes trends in values.[2] Cultural factors also play a part in this segregation, creating repulsions and attractions. From the mobile competing stream of the city's population each natural area of the city tends to collect the particular individuals predestined to it. These individuals, in turn, give to the area a peculiar character. And as a result of this segregation, the natural areas of the city tend to become distinct cultural areas as well—a "black belt" or a Harlem, a Little Italy, a Chinatown, a "stem" of the "hobo," a rooming-house world, a "Towertown," or a "Greenwich Village," a "Gold Coast," and the like—each with its characteristic complex of institutions, customs, beliefs, standards of life, traditions, attitudes, sentiments, and interests. The physical individuality of the natural areas of the city is re-emphasized by the cultural individuality of the populations segregated over them. Natural areas and natural cultural groups tend to coincide.

A natural area is a geographical area characterized both by a physical individuality and by the cultural characteristics of the people who live in it. Studies in various cities have shown, to quote Robert E. Park, that "every American city of a given size tends to reproduce all the typical areas of all the cities, and that the people in these areas exhibit, from city to city, the same cultural characteristics, the same types of institutions, the same social types, with the same opinions, interests, and outlook on life." That is, just as there is a plant ecology whereby, in the struggle for existence, like geographical regions become associated with like "communities" of plants, mutually adapted, and adapted to the area, so there is a

[2] The nature of "value" in city land is a more complex problem than the average text on economics admits. Other cultural factors so condition the economic as to make the process of "value"—for it is a process—one difficult to analyze and state in abstract terms as it applies to city land.

human ecology whereby, in the competition of the city and according to definable processes, the population of the city is segregated over natural areas into natural groups. And these natural areas and natural groups are the "atoms" of city growth, the units we try to control in administering and planning for the city.

ADMINISTRATIVE AREA AND NATURAL AREA

The distinction between the natural area and the administrative area is apparent. The city is broken up into administrative units, such as the ward, the school district, the police precinct, and the health district, for the purposes of administrative convenience. The object is usually to apportion either the population or area of the city into equal units. The natural area, on the other hand, is a unit in the physical structure of the city, typified by a physical individuality and the characteristic attitudes, sentiments, and interests of the people segregated within it. Administrative areas and natural areas may coincide. In practice they rarely do. Administrative lines cut across the boundaries of natural areas, ignoring their existence.

The contrast between administrative and natural areas is not new. Historians long ago pointed out the international complications that have arisen because state lines were not drawn with reference to natural groupings of population and natural geographical units. A historian in a recent volume devotes a chapter to "Natural Areas and Boundaries." The geographer talks of production in terms of natural "regions." Gras, in his *Introduction to Economic History,* reminds us that a stable banking system must be based, not on units of administrative convenience, but upon the basis of natural "metropolitan" areas of financial service. We are just beginning, however, to take account of the natural areas of the city.

Students of municipal affairs are coming to appreciate the relationship of the cultural individuality of the natural areas of the

city to the problem of city government. For one thing, the theory and practice of American municipal government, evolved to meet the needs of village communities, makes no allowance for the existence of distinct areas within the city, each with an individuality, and unequally adapted to function politically under our present system. On the Lower North Side of Chicago, for example, is a rooming-house area affording dormitories to 25,000 people. This population is exceedingly mobile. It turns over every four months. There are no permanent contacts in such an area. No one knows anyone else. There are no permanent interests in the area, and no public opinion. The population are not "citizens" of the locality. There are few votes, and many of these are sold. Local self-government is a myth. The area is administered by the social agencies and the police, though this fact is but imperfectly recognized by these agencies. The situation should be frankly faced. Such an area should be disfranchized and administered from the city hall. Natural areas are unequally adapted to function politically under our present system of municipal government.

Again, administrative units cut across natural areas. Ward lines divide a "Little Sicily," or ward lines encompass a number of natural areas and natural groups. As a result, the ward vote frequently represents a stalemate among conflicting natural areas; and large parts of the city are politically impotent. The real issues of the areas that make up the city rarely get into politics; municipal government becomes a concession, a state of affairs that is rapidly assuming the proportion of a national scandal. One remedy would seem to be the political recognition of the natural areas of the city, and at least a geographical pluralism in city government.

There have been numerous extra-political attempts to solve the problems of local self-government in the city. Among these is the community organization movement. Looking to the village as a "golden age" of social life, and believing that if the neighborli-

ness of the village could be restored in the city the city's problems would take care of themselves, the community organizers have set out to make "villages" of areas within the city. But in selecting the areas for the experiments they have usually but substituted one administrative area for another, totally oblivious of the existence and significance of natural areas and natural groups. The Lower North Community Council of Chicago set out to make a "community" of a section of the city including a colony of 15,000 Sicilians, a colony of 6,000 Persians, a belt of some 4,000 Negroes, a colony of 1,000 Greeks, a rooming-house population of 25,000 "Towertown"—Chicago's Greenwich village—and Chicago's much-vaunted "Gold Coast."

A further complicating factor is introduced by the fact that the natural areas of a city are only relatively stable, either in respect to values or in respect to the cultural segregation upon them. Particularly is this true in a new or growing city. In older cities residence is more permanent; a historical sentiment enters in to stabilize residence, inclining people to cling to the old community. And in a city that is not growing competition for position tends to cease and values and groupings of the population to reach an equilibrium. But in the growing city, expanding as it grows, natural areas are only relatively stable. They seem to change in a predictable manner, a succession like that observable in plant communities. The laws of this succession are imperfectly known, however. One of the purposes of the studies of the Community Research Fund of the University of Chicago has been to analyze this succession. Chicago's "Gold Coast," again, offers an interesting example of succession in process. As more and more of Chicago's industrial kings achieve incomes worthy of evasion of the government tax, they crowd in upon the "Gold Coast." Chicago's first families find themselves increasingly aliens in their own land. And we view the spectacle, not without its pathos, of the perambu-

lators of the leaders of future assemblies disappearing from the Esplanade to reappear along Sheridan Road.

These ecological facts—natural areas within the city, competition for position, segregation over natural areas, succession—are facts that must be taken into account by those who would control the city's growth as well as by those who would administer the city's government. We are interested here not in cities planned from their origin—though there seems to be limits to what can be done in such instances. Berlin, for example, like Amsterdam and many other European cities, has grown since the time when it was a small city according to a carefully directed plan. The scheme is not called zoning in Berlin, but there is a city architect and everything is planned in advance. The city is solidly built; there are no vacant spaces that may serve as speculative holdings. There is absolute standardization of buildings—squares, fountains, apothecaries' shops are located in advance. Houses have shops on the first floor, with the rooms of the tradesmen in the rear. The well-to-do have the apartments above, facing the street. The lower middle class have the back apartments. All classes are represented in a block. It is known how many people will be in each block, and what shops will be needed. Yet with all this careful planning Berlin has gotten out of bounds. The wealthy want to live on the parks and boulevards. They get located on certain streets. These streets acquire reputation and prestige, become distinctive regions not called for in the city plan. Values rise. Speculation goes on. The city gets out of control. Especially is this true since the war, with its sudden turnover of fortunes and breaking down of class distinctions.

The experience of the Chicago Zoning Commission affords an interesting example of an attempt to control the growth of a new, rapidly growing, unplanned city. The Chicago zoning ordinance has been approximately two years in operation. Mr. H. J. Frost,

formerly of the engineering staff which gathered the data on which the ordinance is based, and now of the board of appeals, has kindly given me data on the Chicago situation. His data would seem to indicate that it is futile to impose a plan upon a city which involves the attempt to control land values and the natural groupings of the population. Where use districts cut across natural areas of the city there is a constant pressure upon the board of appeals, which invariably necessitates revision. That is, use districts are merely another form of administrative area where they ignore natural areas. In attempting to control a city's growth we are not merely rearranging our "blocks," refashioning an artifact, but are working with a natural organization and natural groupings within that organization. The ordinance can neither control this organization of the city nor the inevitable succession of the city. It can, however, taking this organization and succession into account, stabilize the processes of city growth and prevent the waste involved in scattering and uncontrolled speculation.

Whatever we may think such evidence indicates, certainly it is apparent that city planning and zoning, which attempt to control the growth of the city, can only be economical and successful where they recognize the natural organization of the city, the natural groupings of the city's population, the natural processes of the city's growth. An ideal city is not likely to be the mold of a real city.

NATURAL AREAS AND A SIGNIFICANT STATISTICS

One of our crying needs in planning for and administering the city is a significant statistics of city life. But statistics, to be significant, must be based not only upon accurately defined and comparable units but upon units that are actual factors in the process under examination. Our statistics of city life are based, at the present time, upon administrative areas, which have no real corre-

spondence with the natural areas of the city. Consequently, our statistics are of little significance for the problems of city life. Mowrer, in his recent study of family disorganization in Chicago, found that statistics of family disorganization meant nothing until they were prepared for natural areas. Similarly, Shaw, studying the problem of juvenile delinquency, found that statistics, revealing when compiled for the natural areas of the city, meant nothing when compiled for wards.

The natural areas of the city are real units. They can be accurately defined. Facts that have a position and can be plotted serve to characterize them. Within the areas we can study the subtler phases of city life—politics, opinion, cultural conflicts, and all social attitudes. As this data accumulates it becomes possible to compare, check, and fund out knowledge. With natural areas defined, with the processes going on within them analyzed, statistics based upon natural areas should prove diagnostic of real situations and processes, indicative of real trends. It is not improbable that statistical ratios might be worked out which would afford a basis for prediction beyond the mere agglomeration of population, making it possible to apply numerical measurement to that collective human behavior in the urban environment which is the growth of the city.

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V

TYPICAL STUDIES IN URBAN SOCIOLOGY

THE CITY AS A COMMUNITY: AN INTRODUCTION TO A RESEARCH PROJECT

If it is true that the city is the most characteristic phenomenon of modern life it is because in the city the outstanding forces of present-day society are working out their logical consequences in more complete form than elsewhere. Here the operations of capitalism, mobility of population, democracy, individualism, and group action are all found in full swing. And here are displayed their end results in the extremes of luxury and poverty, of civic virtue and crime, of stable social organization and appalling disorganization.

Whether or not the city is a community is, obviously, largely a matter of how we define a community. And this seems to be a matter over which there is the usual difficulty which appears when we undertake to give definite scientific meaning to a term of popular usage. There is, however, in all the connotations of the term "community," both popular and scientific, the fundamental notion of a group of people inhabiting a prescribed geographical area who have a considerable degree of unity in meeting the more important concerns of life.

The chief reason for casting the modern large city outside the community fold is that many observers have been more impressed with the evidences of absence of unity in the city than with the signs of its presence. There can be no gainsaying the evidences of disorganization in the modern great city. National and racial groups gathered from the four quarters of the globe here live in close physical proximity, but with little similarity of tastes or habit or language and little sympathy for, or understanding of, one another. Varieties of religious groups either spend much of their energies in attempting to neutralize the efforts of one another or go their respective ways with indifference and mutual disdain. Warring economic groups, through violent conflict or long-continued competition, wear out one another's resources and at the same time deny their constituents the convenience or utility of their needed services. Opposing ethical standards divide the city into warring factions concerning law enforcement, Sunday observance, race-track gambling. It is not strange that the spectacle of such a discordant medley of hundreds of thousands of individuals without any personal relations except in small selective groups should impress many observers with the lack of any essential unity that might be de-

scribed as communal. Professor Sanderson, for example, says that the large metropolitan city "is a mere aggregation of people living together under a city government."[1]

Such a point of view, however, fails to take account of certain aspects of social unity that are exceedingly significant for modern society. To think of group unity as confined exclusively to situations where simple, face-to-face relations prevail is to neglect some of the most important phases of the present social order. Professor Snedden has well pointed out the highly co-operative nature of much of our mechanized impersonal relations.[2] Mail delivery, road-building, protection from internal and external enemies, are now carried on in a highly impersonal manner devoid of conscious co-operation, but would not be possible if there did not exist a very vital co-operative relationship between the citizens of the nation as well as between states and local groups.

There are several distinctive marks of all modern local groups that should be recognized as applying to cities as well as to rural groups. First, the locality is decreasingly self-sufficient. Government, economic organization, and cultural organization, all are developed on national, or in some cases on world, lines. The citizen of the local group is also a citizen of the state and of the nation, and he consequently relies on these outside agencies for a part of his life-needs. The economic life of the locality practically always reflects the economic conditions of the nation and, largely, of the civilized world. Hence the economic interests of the citizen look far beyond the boundaries of his city. His religion, his intellectual life, and practically all other aspects of his culture are fed by many streams whose sources are far beyond the confine of his locality. The modern local group, whether small rural community or metropolitan area, can in no sense satisfy the life-needs or claim the exclusive loyalty of its members.

In the second place all modern society is highly individualistic as compared with primitive society. That is, much larger place is given for variety of taste and habit and belief. No dead level of uniformity is pressed down on the lives of its members by any modern social group. Specialization and division of labor have been accompanied by differentiation of thought and interest. This means that the unity that exists within any modern group must be an organic unity, a functional cohesion of unlike parts, whether we have in mind economic organization, political organization, or culture. As Professor Cooley has well

[1] *Publications of the American Sociological Society*, XIV, 85.

[2] *American Journal of Sociology*, XXVIII. 681 ff.

shown, the unity of opinion or thought or belief, in a modern group, is a unity that permeates many differences.[8]

In the next place, since the areas over which contacts take place are large, and since our unity is a functional cohesion of unlike parts instead of one of uniformity, the greater part of the relations maintained in modern society are impersonal. Our cultural contacts are through books and magazines and newspapers, and we have no fellowship of the personal sort with thousands who are daily helping to mold our thoughts and shape our personalities. We have very significant business relations with the tea-growers of China, the coffee-growers of Brazil, the diamond-miners of South Africa. The farmer of Montana has definite business relations with the banker of New York. But all this is so mechanized and carried on through such tortuous channels that the personal element has no place in it.

Now, the reason the city is looked upon as a confused mass of people without essential social unity is because in it these characteristics of modern society are seen in their most typical form. The citizens of the city are not bound together by any unique loyalty to a self-sufficient locality. They are highly diverse in their culture and in their interests. Their co-operative relations, except in small selective groups, are highly mechanical and impersonal. But we cannot deny that there is in the city an essential unity. The economic interdependence of city dwellers is certainly greater than is found in the rural community. In the maintenance of the public schools and all the departments of the city government we see a group of common objectives and essentially co-operative activity. The like response to intellectual and emotional stimuli is frequently much more marked over the whole metropolitan area than it is within the rural community.

The question may now be raised, Is a city a community in any sense in which a state or the nation is not one? Do not practically all modern political or locality groups have the sort of unity which we are claiming for the city? The essential difference lies in the number of the interests of the population which have been reduced to a co-operative basis, and in the degree to which the co-operative process is complete. Thus, if we compare the city with the state we find that the urban population is co-operating in many more things than are the citizens of the state. The functions of city government, for example, are much more numerous than those of the state. And governmental activities are not the only field in which the comparison is to be made. In intellectual and

[8] Cooley, *Social Organization*, pp. 121–28.

aesthetic pursuits, in religion, in voluntary civic and philanthropic activities, in business and industrial affairs it cannot be doubted that a larger number of co-operative projects is carried on by the urban population than by the state or nation.

When we compare the degree to which the co-operative process is complete in the city with the degree attained in the functions of the state or of the national group we find the same difference. For example, the co-operative process with respect to the schools is much more complete in the school district than in the state or nation, as are also the local public-health functions as compared with those of the state and nation.

There are undoubtedly striking differences between cities in these respects, as also between rural communities. These comparisons suggest that we may have here a measure of the communal process. All locality groups have a certain degree of communal process. That is, all have a number of co-operative activities, each of which has attained a certain degree of co-operative completeness. But the number and the degree vary greatly. Instead, therefore, of attempting to answer the question whether this or that locality group constitutes a community, we have to determine the extent to which the group is communal, and we have, as means of determining this extent, these objective units of measurement. The adoption of such an objective measure of communal unity frees us from much of the metaphysical character that has permeated our discussion of the community during the past decade. It also eliminates the futile search for the answer as to just what types of locality group are entitled to the designation of community. Any locality group may properly be called a community, or at least a potential community, but the degree to which it has attained the communal character is a matter of quantity and subject to measurement.

We may, in fact, isolate any particular phase of a city's life and undertake to study the degree to which it has attained a communal character. It rarely is the case that the same degree of progress has been attained in this respect in all the different aspects of the life of the city. Within recent years the community movement has been expressed in a number of separate efforts in American cities. The chamber of commerce movement is an attempt on the part of the mercantile and the employing interests to strengthen their position through co-operative effort. The Protestant churches have undertaken a similar project in the church federation movement. The organized labor interests have created the local trades council. The women's club movement has achieved city federations of clubs. Within the same city considerable progress may

have been made toward realizing a business community or a religious community, while other aspects of the city life are still highly unco-operative.

The project in which I am engaged is a study of the community movement among the welfare activities of American cities. One question to be answered by such a study is, to what extent are American cities becoming communal in the development of those activities pertaining to the physical and moral well-being of the population? It seems apparent that this can be measured by determining the number of these activities that are being put upon a co-operative basis and the extent to which this co-operation is effective. Such a study should reveal, with respect to any particular city, the extent to which it has become a community in its welfare activities, and, with respect to the national life, what the tendency is in this field.

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THE LOCAL COMMUNITY AS A UNIT IN THE PLANNING OF URBAN RESIDENTIAL AREAS

The occasion for this study was the request, by the Committee on the Regional Plan of New York and Its Environs, for a formula covering the desirable distribution of neighborhood playgrounds. Proper provision for children's play means, however, much more than the accessibility gained by adequate distribution of play spaces. Children must be protected from dangerous traffic while traveling to the playground, and a certain degree of racial and social homogeneity must be assured among playground patrons or healthy play-life will not occur. Our problem, therefore, became an inquiry as to what arrangement of streets, open spaces, and public sites would best serve and promote a normal neighborhood life.

What does, or should, a neighborhood do for a citizen other than is done for him by the city as a whole? Our study and analysis lead us to these conclusions: The functions peculiar to a city neighborhood, the things whose absence make a neighborhood a less satisfying environment for family life, are these: (1) To give an aesthetic satisfaction, such as is afforded by the character of construction—shrubbery, lawns, state of street—all the things in the proximity of a home which give pleasure or the absence of which arouses disgust; (2) to afford safe access to an elementary school; (3) to provide safe access to congenial play spaces; and (4) to afford easy access to certain small stores and shops.

What changes in street net and open spaces should be made specially for these four aspects of local community life? To determine these we must consider the physical and spatial requirements of our four functions. The satisfaction flowing from residential characteristics will be considered last because it is affected by the other three.

1. *Schools.*—According to Strayer and Engelhardt, an elementary public school should be provided for every thousand or twelve hundred children of school age, or, in a normal population distribution, for approximately every five thousand or six thousand people. The maximum travel distance for the pupil should not exceed one-half mile. In a one-family-house district, where each lot takes about 5,000 square feet (100 feet by 50 feet) with 30 per cent of the area set aside for streets, a population of 5,000 people requires approxi-

mately 160 acres. In the form of a square that area is one-half mile by one-half mile. A school located in the center of such a district would be so situated that no pupil would have to travel as much as one-half mile. If the district were triangular, a half-mile radius would still cover it. Thus 160 acres of one-family houses would ordinarily make a model school district. In proportion as density increases this area can diminish.

So much for size. The next requirement dictated by school considerations is that no pupil should have to cross an arterial street to reach the school. In New York City the automobile has been killing children at the rate of nearly one a day. The remedy is obviously a district protected from through traffic. The best solution seems to be to use arterial streets as the boundaries of the neighborhood district. Make these streets direct, make them wide, but lay them down so that they demarcate, instead of bisect or cut up, neighborhood districts. We come thus to the concept of a cell in the street system, bounded by arterial highways and containing a school district within it. Obviously such an arrangement can be provided only at the time the street net is laid down.

2. *Playgrounds.*—Recreational surveys show that small children will not ordinarily travel more than one-quarter mile to use a playground. If it is more distant they stay away from it. A good school yard in the center of 160 acres affords a public play space that is within a quarter of a mile of most of the families. There should be, however, more than one playground in a neighborhood; with two such areas the distance requirements would be nicely met for all the residents of the district.

Children on the way to play need the same protection from through traffic as pupils attending school, so that a district walled in by arterial streets is also required from the standpoint of good neighborhood recreational service.

3. *Shops.*—City planners consider that one-half mile is the maximum distance which people should have to travel to find a neighborhood store. If it were two blocks it would be better. At the same time residents do not want shops so close that they lower the residential character of the space immediately adjacent to their homes. From time immemorial trading centers have arisen at the junctions of traffic highways. Since our neighborhood district, as thus far laid out, is bounded by thoroughfare streets, the logical and convenient places for shops are on its periphery, at the corners, merging with the business areas of adjoining districts.

4. *Residential characteristics.*—Of course most of the satisfaction arising from a home environment is in the hands of the architect, the landscape artist, the builder, and the subdivider. But the city planner can also help. Take our walled neighborhood district. Suppose it could have a special street system of

its own, converging upon a green in its center, with the public school on one side, a couple of churches and a little theater filling in the other sides, the whole civic center planned and laid out artistically—would not such a neighborhood afford distinction and the finer kind of satisfactions to all its residents?

A neighborhood district walled in with highways and provided with its own special street system would in itself be the physical stimulus for a definite local community consciousness. The relation of such a psychical state to residential characteristics is very real. The architect and real estate subdivider may sell you a home and a charming environment. But you can preserve those residential characteristics after the real estate corporation has gone *only* by combining with your neighbors for that purpose. The municipality will not do it for you. Experience shows that whether or not a local taxpayer's association will arise and function depends upon certain physical conditions. The area within which the possible members live must not be too large, and it must be visibly demarcated. Before the leaders of any movement can issue a call to a meeting they must determine whom to invite. Unless the precise area of the common interest seems obvious no movement will start. Thus the arterial highway boundaries of the neighborhood district play a real part in stimulating and making association possible.

Our study has led, then, to the conception of a specialized neighborhood district plan. We think of it as a rather elastic pattern which might serve as a unit of design in laying out the residential sections of new urban extensions. In population and shape this neighborhood unit is the best school district—whatever educational authorities say that is. It has school and institutional sites in the center and shopping districts at the corners. It is bounded and walled in with traffic highways or non-residential areas, and has within its limits a special street system which favors direct circulation for those living within the unit and the by-passing of it by travelers having no business with its residents. Within such a district there would be small parks and open spaces suited to neighborhood use; ideally, 10 per cent of the total area would be thus allocated. Given a layout embodying these principles, we believe that an environment is provided which meets the peculiar needs of local community life.

Observation of current real estate tendencies leads us to believe that the commercial effort to satisfy the demand for harmonious and pleasing residential environments will of itself bring about the development of neighborhood districts similar in many ways to the pattern we have outlined. This movement can be aided, however, by the establishment of municipal planning boards and by legislation which gives a premium to comprehensive planning and develop-

ment. Socially, the result of the movement will be the reappearance of the local community, differing from the village prototype in the absence of the occupational basis. The new grouping will show greater cultural and economic homogeneity since it will largely result from the conscious choice of homes on the basis of similar standards and similar means.

CLARENCE ARTHUR PERRY

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THE RESEARCH RESOURCES OF A TYPICAL AMERICAN CITY AS EXEMPLIFIED BY THE CITY OF BUFFALO[1]

As a member of the University of Buffalo Committee on Economic and Social Research the writer has, during the past year, made a reconnaissance of the research resources of the Buffalo area. The material uncovered may serve as a typical survey of the research data available in the average American city concerning demographical factors, including vital statistics, ecological and economic factors, pathological factors, and miscellaneous factors.

Demography and vital statistics have for their major source of data the United States Census, whose decennial publications tabulate the population of cities such as Buffalo according to a wide range of criteria. In addition there are the intercensal publications, such as the census monographs, one of the most important of which, from the viewpoint of this paper, is Rossiter's work on *Increase of Population in the United States, 1910–20,* which gives information on population increase, movement, and so forth in Buffalo as well as other cities. Another group of intercensal reports are those on vital statistics, which appear annually and contain detailed rate tables on births and deaths for all the major cities of the registration area. The mimeographed daily press releases issued by the Census Bureau give timely data[2] on many subjects, including birth- and death-rates, infant mortality, automobile fatalities, a so-called "weekly health index" by cities, and marriages and divorces by counties.

Supplementary to the United States census publications are the publications of the state of New York, such as the decennial census of New York State, which appears midway between the federal censuses, and particularly the annual reports of the New York State Department of Health, notably those on vital statistics and marriage statistics.[3]

Among local sources are the annual reports of the municipal health department, the annual reports of the department of police, which contain de-

[1] Paper read before Social Research Section of the American Sociological Society, New York City, December 28, 1925.

[2] For example, the writer received on December 22 a statement of automobile fatalities up to December 5.

[3] Two volumes. The completeness and scientific value of these reports are largely due to the efforts of Professor W. F. Willcox of Cornell University and the late Dr. Frederick Eichel, for many years in charge of their preparation.

tailed accounts of homicides, and the school census, which makes a separate count of all children between the ages of four and eighteen and, in its records of removals of children from one precinct to another, provides an indication of intra-urban migration. Finally, the Buffalo Foundation, a private agency endowed for social research and experimentation, is, with the collaboration of the department of health, conducting a detailed study of infant mortality. This material is published in the monthly bulletin of that organization known as *The Foundation Forum.*

Some of this information, as the school census, which is contained in the files of public agencies is of the nature of a public record and, in the absence of specific legislation or regulation to the contrary, is usually open for inspection or may be examined by special permission. The student, as a citizen, has the right to examine this material, and, as a trained worker in the field of social science, it is his duty to make use of that right whenever it is necessary for the better understanding of the organized life of his community.

While a variety of interests might be subsumed under the heading "ecological and economic factors," this discussion will be confined to questions of climate, housing, health, cost of living, wages, employment, and working conditions. The factor of climate is of course covered by the records of the United States Weather Bureau.

On housing in Buffalo, as elsewhere, information is meager. Nevertheless, there is some material in the records and reports of the Municipal City Planning Commission and the Tenement House Division of the municipal health department.

Concerning health, certain information is contained in the data on vital statistics mentioned above. The records of the various hospitals and dispensaries bear directly on the problem, particularly those of the Buffalo City Hospital, which give medical and family histories, and of the dispensaries, a summary of whose report is included in the annual report of the New York State Board of Charities. The annual report of the Bureau of Public Welfare contains information concerning the number committed by that agency to the City Hospital, while in the annual report of the municipal health department appears a record of the incidence of contagious diseases and a summary of the work done in the tuberculosis dispensary.

Material on the cost of living in Buffalo is included in the admirable tabulations relating to cost of living in the United States published by the Bureau of Labor Statistics of the United States Department of Labor. The Bureau of Labor Statistics, like the Census Bureau, issues press summaries, including cost-

of-living summaries, which give the student information more promptly than do the Bureau's regular publications. A local source of cost-of-living material is a study of family budgets recently made for the Erie County Board of Child Welfare for use in its mothers' pension allowances.[4]

The publications of the New York State Industrial Commission are the chief source in respect to employment, wages, and working conditions. *The Industrial Bulletin,* published by this Bureau, contains articles and statistical series on a variety of subjects. The latter include a monthly index of employment with a separate tabulation covering Buffalo. The Buffalo chamber of commerce also compiles a monthly statement of the number of employees of the principal Buffalo industries.

In respect to wages, the most valuable single source is *Special Bulletin No. 136,* issued by the state Department of Labor, entitled *Union Scales of Wages —1925.* Similar material is published by the federal bureau of labor statistics.[5] Among local sources of information are the monthly labor report covering common labor rates, compiled by the Buffalo Council of the Industrial Relations Association of America, the report of the municipal bureau of public utilities, and the record of appropriations of the Buffalo city council.

A special question arises in connection with the third category of source material, namely, pathological factors, such as poverty, delinquency, mental defect and disease, and child problems. A great deal of valuable material bearing on these topics is contained in the case records of a number of public and private case-working agencies. The question arises whether these agencies can, in fairness to their clients, permit these case records, valuable—nay, invaluable —as they are for scientific inquiry, to be utilized for this purpose. A conference between the writer and the executive committee of the Buffalo Council of Social Agencies developed a general agreement to the effect that the social agencies concerned were quite willing to co-operate in furthering legitimate scientific inquiry on the basis of their case material, but were quite justified in adopting a conservative attitude toward permitting their records to be utilized for these purposes, and that those seeking such facilities would be well advised to confine their activities to so-called inactive or "dead file" cases, to concen-

[4] A new study is now being made by the Buffalo Foundation in co-operation with various case-working agencies.

[5] The latest tabulation is published in the September, 1925, issued under the title, "Wages and Hours of Labor."

trate largely on summary data[6] rather than the details of particular case histories, to use only faculty members or advanced students of tested trustworthiness for such investigations, and, of course, carefully to disguise the identities involved in any material published. Though such a policy undoubtedly restricts the scope of research in this important field, the social scientist should bear in mind that people who are in economic or other distress should not, thereby, give up their rights to privacy—quite the contrary—and that, since the relation of the social worker to his client is rapidly approximating the degree of confidentialness obtaining between physician and patient, it should be subject to the same sort of circumspection that is used by the physician in making scientific use of his case material.

As the foregoing suggests, the bulk of material relating to this group of topics is embodied in case records. In the field of poverty, the files of the Charity Organization Society, the municipal Bureau of Public Welfare, the Catholic Charities, and the Jewish Federation for Social Service are of the greatest value. In the field of delinquency the most valuable source is the case file of the Erie County Probation Department, which contains upward of 10,000 carefully prepared criminal case records. Similar records are maintained in the probation department of the Buffalo city court. In the field of mental hygiene there are extensive records in the files of the Children's Court, the Children's Aid Society, and the Buffalo State Hospital for the Insane, which does a large amount of clinical work in co-operation with the social agencies of Buffalo. Child problems are the special concern of a number of agencies, chief among them the Buffalo Children's Court, the Children's Aid Society, the Erie County Board of Child Welfare, and the child-placing department of the Catholic Charities, all of them maintaining extensive case-record files. Beside their case-records, nearly all of these agencies publish annual reports, all of which contain much socially significant material.

Certain reports from state agencies are also valuable; for example, the reports of the state Hospital Commission in the field of dependency, the reports of the state Board of Charities and the state Charities Aid Association; in the field of delinquency, the annual reports of the department of police and the state Prison Commission; and a general index of social pathology in Buffalo is embodied in the tabulation, in the annual reports of the state Board of Charities, of the commitments to various state custodial and correctional institu-

[6] For example, age, nationality, type of case, type of treatment, etc., of a given number of cases.

tions by counties, which makes it possible to construct a time series relating to the incidence of various types of pathological conditions in the Buffalo area.

One important topic under the fourth, or miscellaneous, classification is the conduct and co-ordination of organized social work. The most important activities in this direction have been undertaken by the Buffalo Foundation, which has made certain special studies of the cost of conducting social services. In addition, the Buffalo Joint Charities and Community Fund, and Catholic Charities, prepare detailed budgets for their co-operating agencies which provide valuable information on charity organization and finance.

In this brief survey enough and more than enough has been brought out amply to justify the statement that the modern American city provides any reasonably enterprising student with a wealth of source material already gathered for him. He need not wait for the leisure and the resources to prosecute an investigation on his own account. Rather he needs to gird up his loins and wade into the vast accumulation of valuable data that lies neglected all around him.

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THE STUDY OF ETHNIC FACTORS IN COMMUNITY LIFE[1]

Through the study of ethnic factors in community life, an attempt is being made to develop a technique for the analysis of ethnic factors in interaction in a given unit of the population. Research plans for Providence, Rhode Island have been projected on the basis of experimental work which has been carried on in New London, Connecticut,[2] and of a second study now in progress in Stamford, Connecticut.[3]

The project as a whole makes provision for the following:

1. An analysis of population units with reference to ethnic composition and fusion.

2. The co-ordination of specialized researches in allied fields, applied to the same given unit.

3. Examination of certain aspects of the acculturation process involved in the adjustment of immigrant groups in American community life.

4. The study provides for a base in a typical community, Providence, Rhode Island, wherein specialized researches may be concentrated, and a university center from which such studies may be carried on in allied fields.

For purposes of this study the entire school population is taken as the unit of investigation in each instance. An attempt is made to bear in mind at least six principles, as follows:

1. The difference between amalgamation and cultural assimilation.

2. The fact of biologic adaptation. (Note Pearl and Boas.)

3. The recognition of cultural adaptation irrespective of intermarriage or blood fusion.

4. The conception of the community as a resultant cultural and objective product of interacting ethnic forces.

[1] The above named study operates under a grant from the Laura Spelman Rockefeller Memorial. The research now in progress is conducted through the University under the direction of a committee representing the Department of Social and Political Science and allied departments. Dr. James Q. Dealey is chairman of the committee.

[2] The New London study had its inception in connection with classroom and field work with students in the Department of Economics and Sociology at Connecticut College, under the direction of Professor B. B. Wessel, now on leave of absence from that institution.

[3] See footnote 1.

5. The significance of grandparentage in a determination of racial stock.

6. The significance of the birthplace and residence of parents as a cultural factor in the process of adaptation.

This report is limited to a discussion of the first and basic step of the study, namely, the analysis of racial composition and of facts of ethnic fusion. Studies of racial composition are customarily made on the basis of parentage. In many instances racial origin is determined according to paternal birthplace, a method which does not accurately indicate ethnic origin. The birthplace or origin of the four grandparents of the child is a better index of stock. On the other hand, to base a study on grandparentage only is to recognize stock as a hereditary force but to ignore the changes resulting from acculturation which may occur in the generation of parents as a result of migration and new habitation. For this reason recognition must be made of the birthplace or origin of six immediate ancestors, two parents and four grandparents.

The method adopted would seem to have the following merits:

1. In taking as its unit the school population it is taking that section of the population whose participation in the life of the community is predetermined.

2. The examination of the origin of two ancestral generations recognizes the fact that these constitute both biologic and psychologic factors in adaptation.

3. The maternal as well as the paternal line of descent is considered. The practice, due probably to our citizenship regulations, of basing composition and fusion studies upon paternal origin is justifiable neither on biologic nor on psychologic grounds.

4. The method provides for a recognition of simple, double, and triple fusion in each family. Fusion, or intermarriage, may originate (within the generations covered by the study) with either the parents, the maternal grandparents, or paternal grandparents, or it may occur in all three.

A few of the results obtained in the first study are as follows:

1. The New London study emphasizes heterogeneity of the population. Thirty-two groups enter into composition, and all but two into actual fusion.

2. Native stock diminishes rapidly depending upon the measuring-rod used to determine the same. For purposes of this discussion, native Americans are native-born of native grandparents. A comparison of the results for nativity as arrived at by different methods gives the following:

		Percentage of Native Born
The 1920 federal census, city of New London		75.0
School census of this study	Children	92.4
	Parents	39.5
	Grandparents	32.0

But this is not the end of the reduction of native stock. The study further indicates that in only 22 per cent of the homes are all four grandparents native born. Native homogenous families constitute only 22 per cent of the total number of homes. Ten per cent of the native-born grandparents have been absorbed in the fusion process.

3. Twenty-two per cent is not an irreducible figure for native stock. Census figures for 1896 give a percentage for native parentage of school children as low as 50 per cent. It is generally known that there was considerable Dutch and Irish stock in the community even in Colonial days, so that "native" stock is not necessarily Anglo-Saxon nor homogenous in origin.

4. Pure Italian stock is a close rival to pure native stock. Italian grandparentage is unmixed in 20.77 per cent of the homes; native grandparentage has remained intact in 22.04 per cent of the homes.

TABLE I

Stock	Number of Homes	Percentage of Total
Pure native stock (all four grandparents native born)	401	22.04
Pure foreign stock (all four grandparents same origin)	873	48.03
Some fusion	467	25.66
Fusion of generations only, but not of stock	78	4.13

If the above facts of composition are taken to indicate ethnic heterogeneity of the community, the following facts pertaining to intermarriage and fusion may be said to indicate the measures of the tendency to homogeneity.

1. If we limit the term fusion to those cases in which the stock is definitely known, that is, to first- and second-generation immigrants, we find intermarriage in 6 per cent of the total number of homes under investigation (1819).

2. Of first-generation homes, 2.6 per cent are represented in the fusion process.

3. The rate of intermarriage or fusion increases rapidly in the second and third generations (900 per cent).

4. Permitting the term "fusion" to apply to cases where there is a third generation factor, i.e., native Americans, we find fusion occurring in 25.7 per cent.

5. A third-generation factor appears in 19.3 per cent of the total number of cases of fusion.

6. Of the total number of cases in which there are native American factors, 46.8 per cent are in fusion.

7. Fusion of native stock is very rapid—at the rate of 30.67 per cent in a generation, as measured by the absorption of grandparents into the population as a whole.

8. It became obvious in the course of the study, that a large number of "Canadians" in the community are really second-generation Irish.

9. In practically every combination the Irish women lead in fusion, i.e., in the different generation combinations, in the generation of parents as well as of grandparents. They marry into widely different racial groups.

It may be asked, What are the possible applications of such findings? If our findings are indicative, and they cannot be so regarded until several parallel studies have been completed, several problems are involved:

1. This nation has, in recent years, been intent upon an analysis of racial composition, upon which it bases legislation of far-reaching importance. The results of such analyses are dependent upon principles of classification. Different methods bring widely different results.

2. In view of the fact that in 30 per cent of the homes examined children are the product of some kind of ethnic fusion, it must be recognized that this group of children constitutes a separate unit in all research studies—or as subjects of educational procedure—whether the interest be in health indexes, growth studies, the measuring of intelligence, the determination of educational practice, or an examination of the effects of fusion.

3. The above statement holds true also in a study of mental averages for the different racial groups. Without inquiring at all into the adequacy of the present mental tests for a determination of racial intelligence the whole basis of classification may be called into question, and it must be urged that only those who are racially homogenous can be counted within a given ethnic group, and that others constitute a unit for experimental work.

It might be added that this study is an attempt to recognize that the correct way to study ethnic forces at work in modern community life is to study the community as a unit and the ethnic forces therein from various angles, and that the first step for the purposes of orientation and exploration is a careful analysis of the population unit under investigation.

B. B. Wessel

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SEGREGATION OF POPULATION TYPES IN THE KANSAS CITY AREA[1]

Casual observation and superficial studies indicate that the population of Greater Kansas City, as of other urban areas, is distributed and segregated with reference to the following factors: (1) There are a number of "natural areas" determined largely by topography and the organization of transportation. (2) Peoples of different color are more or less segregated. (3) People with distinctive language and culture are grouped together. (4) Incomes and land values divide the population into economic classes with separate residence districts. (5) Clients of social agencies are concentrated into definite areas. (6) The physically mobile, i.e., transient, folk are found together. (7) Moreover, this last-named class seems to have the most limited social contacts and most restricted participation in neighborhood and community life. (8) Apart from income levels and national backgrounds persons whose standards of living are similar are to be found living near together. The present report deals almost entirely with the last four aspects of segregation.

By means of spot maps and personal interviews two precincts were chosen for study in each of the three municipalities (Kansas City and Topeka, Kansas, and Kansas City, Missouri). These pairs of precincts, which were designated *A* and *B*, respectively, differed strikingly in that in the *B* precincts lived many persons and families served by social-work and health agencies, while the *A* precincts received almost no such service in the year studied. But in other respects the *A* and *B* precincts were believed to be much alike; specifically so in race, nationality, income, and schooling. The hypothesis to be tested was that mobility furnished a clue to explanation of the segregation of maladjusted folk in the *B* precincts.

The following data indicate the degree of success that attended the effort to eliminate race, nationality, income, and schooling as possible causes of the segregation. The population of all six precincts was white and overwhelmingly native-born. There were no Negroes at all, and the few foreigners, with rare exceptions, had been long in this country and were naturalized. With reference

[1] The data included in this paper were assembled by three graduate students at the University of Kansas: Mrs. W. F. Asendorf, Miss Louise Griest, and Mr. Robert O. Loosley. The original data may be found in their unpublished theses in the University of Kansas library.

to economic status it was found that in two pairs of precincts the differences were relatively small. But in the third pair (Kansas City, Kansas) there was a marked divergence. The lists of occupations represented in the *A* and *B* precincts are very similar, but there is a slight excess of "white-collar" jobs in the *A* precincts. Also, there are more employed women and children in the *B* precincts, especially in the two Kansas City's. As to education, there was found to be relatively little difference, either in the age of leaving school or in the grade reached. However, such differences as obtained were consistently in favor of the *A* precincts and were most marked in Kansas City, Kansas. The educational status of school children varied correspondingly. That is, there was more retardation and less acceleration in the *B* precincts, this difference being most marked in Kansas City, Kansas.

On the basis of these data it was felt that factors of race and nationality had been eliminated as possible causes of the segregation of maladjusted folk in the *B* precincts. In two of the three cities differences in income and education were very largely ruled out. The next task was to determine whether the *A* and *B* precincts differed significantly as to physical and social mobility.

Physical mobility was measured in terms of length of residence in house, precinct, and city, reregistration of voters, ownership of homes and furniture, and continuity of employment. In the two Kansas City's it was found that residents of the *A* precincts had, on the average, lived much longer in house, precinct, and city than had residents of the *B* precincts. In Topeka this relation was reversed. The explanation of this lies very clearly in the fact that many new houses had been erected in the *A* precinct during the past six years, while very few had been built in the *B* precinct. In all three cities the relative transiency was more accurately shown by comparing the percentages in each precinct who had lived in the house, precinct, or city less than one year. On this basis the physical mobility of the *B* precincts was markedly and consistently greater than that of the *A* precincts. One objection has been raised to this method of measuring mobility. It is to the effect that length of residence of those now in a district is no index of the time they may be expected to remain. Taken by itself we are inclined to believe this criticism sound, but taken in connection with our knowledge of the trends in these districts we believe our data to be highly significant indexes of physical mobility. We refer specifically to the fact that each of the *B* precincts is being invaded by business and industry, while each of the *A* precincts is protected by zoning ordinances. Hence there is every reason to believe that, whatever changes may take place in the physical mobility of the *A* precincts, that of the *B* precincts will almost certainly increase. In Kansas City, Missouri, it was possible to make a test in terms of the

reregistration of voters. In the *A* precinct 90 per cent of the 1924 voters were eligible to vote in the same precinct in 1925, while the corresponding percentage in the *B* precinct was only 68. In the *A* precinct only 16 per cent of the 1925 voters were new in the precinct, while the corresponding percentage in precinct *B* was 29. Further light on the relative physical mobility of *A* and *B* precincts is shed by data concerning the ownership of homes and furniture. Those who expect to remain for some time are likely to buy property, and then the fact of ownership makes them more likely to remain. The percentage of ownership, both of homes and of furniture, was markedly greater in the *A* precincts than in the *B* precincts. Thus the evidence seems fairly convincing as to the greater physical mobility of the people living in the *B* precincts.

Bearing both on physical and social mobility are the data concerning length of time in occupation and in job. These show a marked and consistently greater stability in the *A* precincts. But a more important criterion of social mobility is that of range of contacts and participation in group life, such as membership in local organizations. The present study took special account of church, lodge, and union. It showed that membership in the first two organizations was much more general in the *A* precincts, while union membership was about the same in *A* and *B*. Likewise, there was, in the *A* precincts, a much higher proportion of persons belonging to two or more organizations than in the *B* precincts.

The evidence of this study, though admittedly incomplete, indicates that transiency, i.e., physical mobility, is much more marked in the *B* than in the *A* precincts, while the social contacts and participation in community life—social mobility—are much greater in the *A* than in the *B* precincts. Race, nationality, income, and education are not the only factors involved in the segregation of maladjusted folk into "trouble centers" in our large cities. On the contrary, such segregation may take place independently of these factors. When this is the case two of the significant variables are physical and social mobility, there being in the "trouble centers," sometimes at least, an excessive physical mobility coupled with a limited range of social contacts and a limited participation in group life.

This opens up two further problems: (1) how have the people in the *B* precincts come to be so transient and at the same time socially isolated; and (2) how have the *A* and the *B* groups come to occupy their respective locations in the urban area? The first we are frankly unable to answer. The second can be answered for the most part in terms of the histories of the several districts.

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THE EFFECT OF IMMIGRATION UPON THE INCREASE OF POPULATION IN THE UNITED STATES

The objective in this investigation was the application of the method of correlation to data in the sociological field to discover whether or not and to what degree immigration into the United States retarded the natural increase of the native stock. In order to realize the objective it was necessary to establish a measure of increase. The ratio of infants of a certain class to one thousand females of the same class was selected because it is applicable to all states, areas, and kinds of populations. The class of infants was that of native or foreign plus one-half those of mixed parentage, and the corresponding class of females was all native or foreign white females fifteen to forty-four years of age.

With such a measure it was found possible to throw light on the question of the effect of immigration on population increase aside from applying it to correlation. By it we are able to judge as to the comparative rate of increase of native white and foreign-born white stock. If we regard the increase of the native white stock as one hundred in each case, then we have these rates of increase of the foreign-born white stock for the nation and for each of the divisions. For the nation it is 169. For the various divisions it is as follows: New England states, 222.5; Middle Atlantic, 224; East North-Central, 189; West North-Central, 185; South Atlantic, 132; East South-Central, 114; West South-Central, 136; Mountain, 159; Pacific, 183. We notice that in the heavy foreign-born sections of New England and the Middle Atlantic states the foreign stock is increasing more than twice as fast as native whites, while in the three southern divisions having little immigration, only about one-fourth faster on the average than the native white stock. When we rank the divisions according to the degree of preponderance of increase of foreign-born whites over that of native whites, and again according to the percentage of foreign whites in the population, there is a 67 per cent agreement in the ranking. This indicates that the increase among the native whites varies inversely with the percentage of foreign whites in the population.

It is worth mentioning, in passing, that our facts are sufficient to show that the native white stock present at the founding of our nation would have declined, undoubtedly, had there been no immigration to our shores. The line of proof is twofold—that contained in the trend of increase prior to the coming of

immigrants in great numbers and that contained in the steady decline in rates of increase among nations which have never had any considerable immigration.

Out of the many correlations that were run we may take occasion to mention certain of the more important ones and to point out a few significant features. The subject in all of the correlations was the ratio of infants of native white mothers plus one-half those of mixed parentage to 1,000 native white females fifteen to forty-four years of age. When we regard states as states, the coefficient of correlation between the subject mentioned and the percentage of foreign-born was —0.76, with an error of 0.04; with the percentage of urbanism the coefficient was —0.85, with an error of 0.03; with percentage of negroes in the population, the coefficient was +0.42, with an error of 0.08; with the percentage of the population engaged in manufacture, the coefficient was —0.71, with an error of 0.05; with per capita income, the coefficient was —0.82, with an error of 0.03; and with the educational index the coefficient was —0.64, with an error of 0.06.

In the case of the urban population of the nation, with the percentage of foreign-born as the relative, the coefficient was —0.60 with an error of 0.06; with percentage of Negroes as the relative, r was +0.57 and P.E. was 0.07. For the rural population, when the relative was percentage of foreign-born, r was —0.62 and P.E. was 0.06; when the relative was percentage of Negroes, r was +0.44 and P.E. was 0.08.

In the case of thirty-six states having a foreign population of 5 per cent or more, with the percentage of foreign-born as relative, r was —0.73 and P.E. was 0.075; with urbanism as relative, r was —0.70 and P.E. was 0.056; with industrialism as relative, r was —0.62 and P.E. was 0.07.

In the case of twenty-four states having a Negro population of 3 per cent or more, with urbanism as relative, r was —0.93 and P.E. was 0.02; with percentage of Negroes or relative, r was +0.78 and P.E. was 0.05; with industrialism as relative, r was —0.78 and P.E. was 0.05.

The number of items in some of these series were too small to render the best results; but they are confirmatory of the results obtained from the more extensive series.

A few comments may be in order.

1. The results of correlation support those obtained from the other studies mentioned, namely, that the rate of increase of native whites is in inverse proportion to the percentage of foreigners in the population.

2. The presence of Negroes exerts an influence directly contrary to that of the presence of foreign whites. The highest rates of increase among the native

whites is greatest where the percentage of Negroes in the population is greatest. Since the position of the Negro is one of status, he does not compete with whites for wealth or position. Hence he is an advantageous factor and stimulates, or at least does not restrict, increase of population.

3. The presence of the foreign-born is only one of several factors that check the increase among the native whites. For the states, the comparative checking strength among factors which may be considered causal as expressed by the rank of coefficients are as follows: urbanism, income, foreign-born, industrialism, education, Negro. By the use of the method of multiple and partial correlation relative to urbanism and foreign-born, we get these results. When urbanism is excluded, the coefficient of increase and foreign-born is —0.58. Excluding the force of foreign-born gives a coefficient between increase and urbanism of —0.61.

4. From the somewhat independent lines of procedure represented in this investigation we feel warranted in saying that it has been demonstrated that immigration does retard the increase of the native white stock. Further, that since the native white stock comprises over 77 per cent of the national population, we may be warranted in saying that immigration checks the increase of the nation's population. But we have not shown that our population is less than it would be had there been no immigration, and it is our firm belief that it is impossible to demonstrate that or its opposite.

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CHANGES IN OCCUPATION AND ECONOMIC STATUS OF SEVERAL HUNDREDS OF AMERICAN FAMILIES DURING FOUR GENERATIONS

The materials presented in this paper are a sample of a study of the vertical social mobility in its occupational and economic forms, the study which on a larger scale is now being carried on at the University of Minnesota. The data are collected through questionnaires from the students of the summer session at the University of Minnesota, from Minneapolis business men (by Miss M. Tanquist), and from the alumni of the University of Minnesota (by Mr. O. M. Mehus).

TABLE I

Generations	Summer Session Students			Minneapolis Business Men		
	Number of Families Studied	Number of Cases in Which Son's Occupational Status Is Identical with That of the Father.	Percentage of Transmission of Occupation from Father to His Son	Number of Families Studied	Number of Cases in Which Son's Occupation Is Identical with That of His Father	Percentage of Transmission of Occupation from Father to His Son
Parental great-grandfather and grandfather . .	93	67	*72.0*	23	16	*69.5*
Grandfather and father .	131	51	*38.9*	49	22	*44.9*
Father and propositus .	85	9	*10.6*	59	6	*10.1*

I. INTEROCCUPATIONAL MOBILITY

Table I shows the percentage of the transmission of the father's occupational status to one of his sons during four generations.

M. Mehus's data concerning 407 alumni have given the 17.7 per cent of the transmission from the father to the propositus.

In Table II there is taken not one, but all, grandfathers' independent sons gainfully engaged and all independent sons of the fathers of the propositi. The results of this "wholesale" transmission of occupation are as follows.

From the tables it follows that, within these groups, the percentage of transmission of occupational status from fathers to sons has been systematically decreasing from generation to generation as we pass from the great-grandfathers to the propositi. This means that family occupational status

tends to determine less and less the occupational status of its children. This indicates that, as far as an inheritance of occupation is a conspicuous trait of a caste régime, the caste tendency has been decreasing from generation to generation. This signifies that a man's occupation is now determined in a greater degree by other, than family, agencies and conditions. Finally, the figures

TABLE II

Generations	Summer Session Students			Minneapolis Business Men		
	Number of All Independent Sons	Number of Sons Whose Occupation Is Identical with That of Their Fathers	Percentage of Transmission of Occupation from the Father to His Sons	Number of All Independent Sons	Number of Sons Whose Occupation Is Identical with That of Their Fathers	Percentage of Transmission of Occupation from the Father to His Sons
Parental grandfather and his sons . . .	330	122	*37.0*	168	49	*29.2*
Father and his sons .	299	79	*26.1*	142	32	*22.5*

show an increase of interoccupational mobility from generation to generation. I have some reasons to think that the above trend is common to a considerable part of the population of the United States and Europe, but this supposition still must be tested by further studies in this field.

In accordance with these conclusions Table III shows the occupational

TABLE III

Occupational Change within the Life of One Generation

Generations	Cases Studied		No Change		One Change		Two Changes		Three Changes		Four and More Changes	
	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Fathers . .	49	100.0	28	57.2	16	32.6	4	8.2	1	2.0	0.0	0.0
Sons . .	46	100.0	20	43.4	13	28.3	5	10.9	7	15.2	1	2.2
Sons (alumni) .	407	100.0	173	42.5	161	39.5	48	11.7	23	5.6	2	0.4

change within the life of one generation. Though the occupational career of the propositi as different from that of their fathers, is far from being ended, nevertheless the number of interoccupational shiftings is greater in the generation of the propositi than in that of their fathers. This indicates again a tendency toward an increase of interoccupational mobility.

Table IV shows throughout how occupations are dispersed, not only where the sons belong to the same occupational group as the fathers, but on the other hand, from what occupational groups are recruited the members of the same occupation.

TABLE IV

Fathers' Occupation	Sons' Occupation: Farmers	Teachers (Elementary and High School	College and University Instructors	Physicians, Clergy, Lawyers, Artists, Other Professions	Students of Colleges and Universities	Manufacturers, Merchants, Business Men, Bankers, etc.	Executives, Clerks	Skilled Labor	Semiskilled and Unskilled Labor	Total
Farmers . .	68	61	3	60	18	37	7	13	11	298
Teachers of elementary and high school . .	2	3	1	2	1	..	..	..	..	9
College and university instructors ..	..	..	..	..	1	..	..	..	..	1
Physicians, clergy, lawyers, artists, other professions	1	25	6	44	14	7	2	1	2	102
Manufacturers, merchants, business men, etc.	1	24	4	38	8	37	10	17	7	146
Executives, clerks	1	1	2	2	1	7	11	1	..	26
Skilled laborers	4	6	2	8	6	9	4	7	1	47
Semi-skilled and unskilled laborers	..	2	..	1	2	2	2	1	2	12
Total ..	77	122	18	155	51	99	36	40	23	621

From Table IV it follows that the sons of the fathers of the same occupation are dispersed throughout the most different occupations; that the members of each occupation are recruited from the offsprings of the different occupational groups (vertical line); that the proportion of the children who enter the father's occupation is still the highest of the proportion who enter any other occupation; that some of the sons of a paternal group are climbing up the social ladder, while some others are going down; that inheritance of occu-

pation in the professional group is somewhat higher than in any other one. So much for interoccupational mobility.

From the table it follows that an increase in interoccupational mobility is not necessarily correlated with that in economic status. It happens to be more stable than an occupational status.

II. CHANGES IN ECONOMIC STATUS

The first result disclosed by the data in this field is that there is no trend of a decrease of transmission of economic status from the father to his sons This is seen from Table V.

TABLE V

Generations	Summer Session Students			Minneapolis Business Men		
	Number of Cases Studied	Number of Cases in Which Son's Economic Status Is Identical with That of His Father	Percentage of Transmission of Economic Status	Number of Cases Studied	Number of Cases in Which Son's Economic Status Is Identical with That of His Father	Percentage of Transmission of Economic Status
Paternal grandfather and father . . .	127	82	64.6	41	11	26.8*
Father and propositus .	123	82	66.6	42	11	26.1*
Father and all his independent sons . .	414	305	73.7	110	32	29.1*

* Absolute percentage of transmission here is very different from that of the students' group because in the group of the business men have been used more detailed subdivisions of the income groups than in the students' group. Hence the difference in the percentage of the transmission.

Table VI shows that the economic status of the "middle" groups fluctuates less than that of the "poor" or of the "well to do" classes: percentage of an identical economic status of the father and the son is much higher in the "middle" group than in the extreme ones.

This table shows that for the poor there are greater chances to climb up than to go down, while for the well-to-do groups the chances are reversed. This may be the result of the limited number of the cases studied. It may, however, indicate also a real tendency for the groups studied.

Finally, Table VII shows that the greater the economic distance to be crossed by an individual, the less is the number of such "jumpers." Under the "ordinary" change in economic status I mean a transition from one status to the next higher or lower. Under the "extraordinary" change I mean a transition from one status to the third, when the next step is skipped. The "extraor-

dinary change of the second degree" means a transition from a status to the fourth, when the two next steps are skipped.

To what extent the above results are typical I cannot say. This may be said only after further studies in this field, studies which are worth making in view of the theoretical and practical importance of the discussed problems.

TABLE VI

Economic Status of Fathers	Total Number of Cases (Sons) Studied	Number of Cases in Which Economic Status of Sons Is Identical with That of Their Fathers	Percentage of Transmission of Economic Status from the Father to the Son	Percentage of Changes in Economic Status of Sons	Direction of Changes: Climbing Up or Going Down
	Economic Status of Sons				
Students' fathers poor (income less than $500) . . .	18	3	16.7	83.3	All went up
Middle (from $500 to $3,000) . . .	329	277	84.2	15.8	8 per cent went up; 7 per cent, down
Well-to-do ($3,000 and more) . . .	67	39	37.3	62.7	Went down
Businessmen fathers:					
Income less than $700	4	0	0.0	100.0	Went up
Income from $700 to $1,200 . . .	14	5	35.7	64.3	Went up
Income from $1,200 to $2,000 . . .	30	15	50.0	50.0	27 per cent went up; 23, down
Income from $2,000 to $5,000 . . .	55	14	25.4	74.6	40 per cent up; 34, down
Income $5,000 and over	18	4	22.2	77.8	All down

TABLE VII

Groups Studied	Total Percentage of Changes	Percentage of Ordinary Changes	Percentage of Extraordinary Changes	Percentage of Extraordinary Changes of Second Degree
Fathers of the students . . .	100.0	91.5	8.5	
Students	100.0	92.8	7.2	
Minneapolis business men . .	100.0	76.0*	18.0*	6.0

* The difference in absolute figures compared with that for the summer session group is again due to the more detailed subdivision of income groups in the group of the business men.

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INDEXES

INDEX TO AUTHORS

Abrahams, Israel, 110
Adams, Harold, 138
Allport, F. H., 31
Anderson, Nels, 198, 202, 203
Asendorf, Mrs. W. F., 251

Babcock, F. S., 168
Bakst, L. N., 39
Bancroft, H. H., 201
Barrows, H. H., 167
Bartlett, F. C., 31
Bataillon, Lionel, 4
Belloc, Hilaire, 106, 107
Bergson, Henri, 12, 63
Bloch, I., 201
Boas, Franz, 94, 247
Boas, Helena, 94
Bogardus, E. S., 40, 54
Bowman, LeRoy E., 160
Burgess, E. W., ix, 5, 12, 40, 98, 162, 194, 221
Butterfield, K. L., vii
Carpenter, Niles, 246
Carver, T. N., 85
Chaddock, R. E., 160
Chamberlain, H. S., 105
Cohen, Israel, 107, 109
Cooley, C. H., 21, 23, 34, 234, 235

Davenport, C. B., 92
Davies, G. R., 154
Dealey, J. Q., 247
Dewey, John, 13

Dublin, Louis, 139

Durkheim, Émile, 3

Eichel, F., 242
Elmer, M. C., 163
Ely, R. T., 168

Engelhardt, N. L., 238
Evers, C. C., 167

Faris, Ellsworth, 37
Faris, John T., 179
Febre, Lucien, 4
Fisher, E. M., 167
Fishberg, M., 106, 107
Frost, H. J., 227

Galpin, C. J., vii
Gamble, S.D., 102
Gehlke, C. E., 138
Geiseler, W. 201
Giddings, F. H., 47
Gillette, J. M., vii, 154, 256
Goodrich, Ernest P., 150
Gras, N. S. B., 177, 191, 224
Gumplowitz, L., 70
Griest, Louise, 251

Haldane, John Scott, 72
Hart, Hornell, 143
Henley, W. E., 37
Herrick, C. J., 71
Herskovits, M. J., 69, 95, 97
Hurd, R. M., 167, 220
Hurlin, R. G., 216

Isman, F., 178

Johnson, R. H., 68, 90
Johnston, Mary, 155

Knibbs, G. H., 124
Kroeber, A. L., 75

Langdell, Christopher, C., 212
Lebvre, Lucien, 4
Lincoln, Abraham, 217
Loosley, R. O., 251
Love, A. G., 92

McDougall, W., 29, 31, 32
McKenzie, R. D., 182, 205
Mead, G. H., 21
Mehus, O. M., 257
Morehouse, E. W., 168
Mowrer, E. R., 229

Napoleon, Bonaparte, 41
Newsholme, A., 124
Nietsche, F. W., 63
North, C. C., 237

Ogburn, W. F., 8
Olcott, G. C., 204

Park, Robert E., viii, 18, 40, 98, 194, 221, 223
Parker, Carleton, 31
Parkhurst, C. H., 219
Patri, Angelo, 216, 217
Patti, Adelina, 39
Pearl, R., 247
Pearson, Karl, 133
Persons, W. M., 134
Petermann, A., 119
Perry, C. A., 241
Pozderski, Roman, 138

Queen, S. A., 253

Reckless, W. C., 198, 205
Reuter, E. B., 69
Riis, Jacob, 219
Root, Elihu, 221
Ross, J. M., 91
Rossiter, W. S., 242

Sanderson, D., 234
St. Francis, 24
Shaw, C. R., 198, 229
Shideler, E. H., 168
Simmel, G., 55
Sinclair, U., 220
Snedden, David, 234
Sobieski, John, 41
Solenberger, Alice W., 202
Sorokin, Pitirim A., 261
Spencer, H., 28, 74, 75
Spengler, O., 55
Spykman, N. J., 64
Stead, W. H., 219
Steffens, L., 220
Strayer, G. D., 238
Sumner, G. W., 28
Supan, A. G., 119
Sutherland, E. H., 68, 78

Tanquist, M., 257
Tarbell, Ida M., 220
Thomas, W. I., 47
Todd, T. W., 92
Trotter, W., 31

Warming, Eugenius, 3
Weber, A. F., 115, 122
Wesley, John, 25
Wessel, Bessie B., 247, 250
Westermarck, E., 201
Whipple, G. C., 124
Whitely, Opal, 24
Willcox, W. F., 121, 242
Wilson, W. H., 176
Wirth, Louis, 69, 112
Woolston, H. B., 132

Znaniecki, F., 73, 77
Zorbaugh, H. W., 69, 105, 229

SUBJECT INDEX

Assimilation, 7–8

Behavior, conditioning of, 40
Birthrates of American cities, 122–32
Biological and social processes, 70–78

Chicago Zoning Commission, 227–28
City: and art, 62–63; and economics, 61–62; and aesthetic values, 64; and its primary group life, 57; and moral behavior, 59–60; and politics, 60–61; as a community, 233–37; as natural phenomenon, 219–21; birthrate of American, 122–32; centers of, 177–78; centralization in, 175–76; commercialized vice areas, 192–205; complexity of, 58–59; defined, 119; dweller in furnished rooms, 98–105; economic factors in size of American, 133–38; ethnic factors in, 247–50; eugenics of, 79–90; expectation of life in, 139–43; growth of, 5–11, 146–48, 151–54; human ecology of, 167–82; modern, 9–10; natural areas of, 11–12, 98–99, 194–96, 219–29; plan of, in relation to population, 144–50; population distribution in, 139–43; redefinition of, 115–21; research resources of, 242–46; residential areas of, 238–41; rise of the metropolitan, 183–91; social philosophy of, 55–64; sociological structure of, 55; statistics of, 228–29; zones in transition of, 161–63, 196
City plan: and regional planning, 208–11; community participation in, 206–18; local community as a unit in, 238–41; project method in, 211–12
Commercialized vice: distribution of, 192–205; indexes of, 198–205
Community: plant, 3; life-span of, 7
Country, defined, 119
Cultural lag, 8

Demoralization, defined, 47
Density of population: as a basis for defining the city, 115–21; in relation to the maladjustment of youth, 161–63

Ethnocentrism, 28–30
Economic status, changes in, 260–61

Hinterland, 184–90
Human ecology: defined, 3, 4, 167; factors of, 171–72; processes in, 221–24; scope of, 167–82
Human nature: and *einfühlung*, 25; and instinct, 31–33; and social movements, 35–36; as imagination, 27–28; as one's conception of one's self, 17, 23; mutability of, 34–35; nature of, 21–37; origin of, 21–24

Immigration: an increase of population, 254–56; geographical distribution of, 79–80; urban and rural selection, 80–83
Intelligence quotient, communal, 4
Individuality and character, 35–37

Japanese, 80
Jews: a social type, 105–106; city type, 80, 82; types of, 106–12

Labor: and invention, 14; division of, 4
Land values, 6

Metropolitan community, rise of, 183–191
Mobility: and community organization, 155–69; and fluidity, 169–70; and social disorganization, 12; area of greatest, 10–11; as measured by changes in, occupation, 257–61; defined, 12; inter-occupational, 257–60; physical and social, 252–53; vertical social, 257

New York Regional Plan, 214–16

Personality: acquired, 33–34; and individuality, 35–36; as totality of behavior traits, 39; in the urban environment, 38–47; patterns classified, 102–105
Polish immigrant, as a dissociated personality, 45

Population: as affected by immigration, 254–56; declining, 202–204; economics of, 148–49; in relation to city plan, 144–50; mobility of, and community organization, 155–60

Position, concept of, 15

Preliterate peoples, mental capacity of, 25–27

Research resources of Buffalo, 242–46

Segregation: and personal disorganization, 192–93; as a process, 8–9, 179–80; of population types, 251–53

Social distance: and self-consciousness, 16; and status, 17, 53–54; as a result of invasion, 53–54; in the city, 48–54; measurement of, 48–49

Social interaction, classified, 74

Social organism, 15

Social process, defined, 70

Social selection, and the American Negro, 91–97

Social status: and the person, 16–18; of the hybrid, 68, 77–78, 96

Social type, defined, 98

Society: as a moral order, 17; defined, 13

Sociology and biology, 67–69

Statistics, significance for sociology, 18, 161

Urban selection: by birth control, 88–90; by differential death-rate, 83; by differential fecundity, 86–88; by immigration, 80–83; by marriage rate, 83–86

Village, defined, 119

Who's Who, persons in, 4

Youth maladjustment, 161–63

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